The Fundació Lluita contra la Sida (Fight AIDS Foundation) is in the HIV Unit at the Germans Trias i Pujol University Hospital, a public hospital managed by the Institut Català de la Salut (Catalan Health Institute). Part of the activities described in this report should be seen as a result of the work done together with the hospital’s staff. Similarly, the Foundation works closely with the Institute for AIDS Research IrsiCaixa, where more than 50 scientists focus on basic research to understand the mechanisms of HIV infection and to find new therapies and vaccines. This collaborative work facilitates the transfer of knowledge between health professionals and clinical and basic researchers, making us a unique benchmark worldwide.
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AIDS is a global health issue. HIV is the virus that has caused the most deaths in history. Even today, it is responsible for a very serious pandemic that, together with malaria and tuberculosis, represents a major threat to all humanity. Nevertheless, for over 30 years, physicians, researchers, associations, members of the civil society, institutions and people affected, have worked tirelessly to curb its scope. The results of these arduous endeavours can be seen in several indicators, but mainly in the decrease in AIDS cases worldwide, an evidence of improved access to antiretroviral treatment. The number of new HIV infections around the world remains high and has increased in many countries among the most vulnerable groups. In Catalonia, for example, men who have sex with men account for over 51% of new cases.

In the current context, and from the point of view of the Fight AIDS Foundation, lack of funding is now more apparent than ever. The research projects that we are developing suggest that an ultimate solution to HIV/AIDS is very close and our critical contributions in this area could be applied to other biomedicine fields. We are participating in the Hivacat research project for an effective vaccine and the identified candidates are being studied and applied at internationally renowned centres. Furthermore, we are leaders in the study of resistance to antiretroviral drugs, toxicity and new treatment strategies, in addition to our pioneering lines of study on HIV-related complications such as aging, cardiovascular risk or neurocognitive impairment.

From the Fight AIDS Foundation, we strive daily to align research with the needs of our patients, for whom we seek to provide the most comprehensive and high quality care.

Our leadership is strong but we need all the institutional, corporate and social support we can get to meet these needs and remain at the forefront of our efforts. Because this is our chance to end HIV/AIDS once and for all, and we cannot let it pass us by.
THE FIGHT AIDS FOUNDATION is a non-profit organization focusing on healthcare, research and teaching in the field of HIV and AIDS. It was created by Dr Bonaventura Clotet from the HIV Unit at Germans Trias i Pujol University Hospital in Badalona (Barcelona) in July 1992.

FIGHT AIDS FOUNDATION

HEALTHCARE  
RESEARCH  
TEACHING

We provide a comprehensive response to the needs of people living with HIV:
- Multidisciplinary clinical care in an HIV Unit that cares for about 3,000 patients.
- Research tailored to patients’ needs thanks to proximity to researchers and healthcare professionals.
- Fast incorporation of new treatments and new scientific advances into clinical practice.
Since the Foundation was created, multidisciplinary experts (physicians, psychologists, dieticians, nurses and social workers, among others) have joined the HIV Unit to offer comprehensive, high-quality clinical care to HIV sufferers. The Foundation has enabled many patients to benefit from participating in clinical trials with innovative drugs and laid the foundations for the retrovirology laboratory became the AIDS Research Institute IrsiCaixa in 1995.

Thanks to the positive effect of antiretroviral therapy and scientific advances, HIV has evolved from a deadly to a chronic disease, and new needs have emerged. The Foundation has taken on the mission of finding answers to these needs by tracking coinfection by hepatitis and human papillomaviruses, controlling cardiovascular problems, detecting cognitive impairment and diagnosing and treating complications related to general aging.
AIDS (Acquired Immune Deficiency Syndrome) is the manifestation of one or more diseases, the appearance of which is due to the weakened IMMUNE SYSTEM of people infected with HIV.

HIV (human immunodeficiency virus) is a microorganism that attacks the immune system: it infects white blood cells in the human body, affecting specifically the CD4 CELLS, destroying or preventing them from fulfilling their function properly. White blood cells are the human immune system cells responsible for the body’s response against infections and diseases that are permanently threatening us. That is why, after a time which can differ from one person to another, the action of HIV on the immune system makes it lose its effectiveness and no longer protect us. If measures are not taken to treat the infection, AIDS APPEARS IN THE LAST STAGE OF HIV ACTION.
On June 5, 1981, the first five cases of AIDS were reported in Los Angeles, California. Four months later, in October 1981, the first case was diagnosed in Spain at the Vall d’Hebron Hospital in Barcelona: the patient was a 35-year-old man who died a few days after being admitted to the hospital.

The first cases were detected in men who had sex with men, but cases in people with haemophilia and intravenous drug users, both men and women, soon appeared. At that point we were not yet talking about AIDS as such. The expression acquired immunodeficiency syndrome would not be used until a year later, in 1982.

The factor responsible for the damage to the immune system of patients was not known until 1983, when HIV, human immunodeficiency virus, was identified as the causative agent of AIDS and transmission routes were determined.

In the early years it was thought that mere contact with an AIDS patient was enough to become infected with the virus. This led to situations of discrimination and social isolation. The effects of that confusion and fear persist even today.
In 1985, Rock Hudson was the first internationally famous person to reveal he had AIDS. Other cases with a major impact on public opinion included NBA star Magic Johnson and Freddie Mercury. The disease crossed social boundaries and became, in many cases, the most cruel and terrible way of “coming out”.

The advent of AZT, the first HIV drug, took place in our country in 1987. It marked a turning point for people affected as, although its effectiveness was limited and early resistance appeared in many cases, for many people the treatment meant they could continue living. In 1996 a new family of drugs appeared, the protease inhibitors which, in combination with AZT and its successors, enabled better control of the virus. Since then, research advances have been constant and new families of highly effective antiretroviral drugs (HAART) have emerged.

TODAY, SURVIVAL RATES IN PEOPLE WITH HIV ARE SIMILAR TO THOSE IN THE GENERAL POPULATION AND TREATMENT IMPROVES MORE AND MORE EVERY DAY. BUT THAT DOES NOT MEAN WE CAN LET OUR GUARD DOWN.
AIDS

Since the beginning of the epidemic,

30 million people have died due to AIDS worldwide
Spain has reported 83,171 AIDS cases
17,193 in Catalonia
17.8 million children have lost one or both parents due to AIDS

The number of diagnoses of AIDS cases continues to decline globally, reflecting improved access to antiretroviral treatment.

Tuberculosis remains the leading cause of death in people living with HIV. In our environment, it is also the most common AIDS-defining illness. However, the incidence of AIDS-related opportunistic diseases has receded: currently, the scientific community is paying special attention to other pathologies that, although not being AIDS defining, are seen more often in people with HIV than in the general population.
Although mortality from HIV/AIDS has dropped dramatically over the last 15 years in our country, the annual rate of new HIV infections has not decreased. In fact, the number of people living with HIV grows every year, and **in most cases transmission occurs through sexual contact** [88% in Catalonia].

According to the guidelines of the WHO [World Health Organization] in 2013, which recommend the start of antiretroviral therapy from the time of HIV diagnosis, only 9.7 million people were receiving treatment out of the 28.6 million who required it worldwide.

Currently, antiretroviral treatment should be followed for life to keep the infection controlled. It helps to reduce the amount of HIV in the body and block the action of the virus, improving quality of life and decreasing the chances of transmission. It is essential, however, to follow treatment instructions very carefully to prevent the emergence of resistances.
IN INDUSTRIALIZED COUNTRIES, BETWEEN 80 AND 90% OF PEOPLE RECEIVING ANTIRETROVIRAL TREATMENT ARE ABLE TO CONTROL THE VIRUS and suppress its replication. If therapy is followed correctly and treatment is started as soon as possible, the life expectancy of people with HIV is almost the same as the rest of the population. However, HIV is variable and has a great capacity of mutation, and particularly aggressive viruses that are resistant to treatment can infect us. Moreover, drugs are not free from side effects.

Recent studies indicate:

• When a person with HIV has an undetectable viral load in the blood after treatment, the possibility of infecting another person is very low, almost zero. Moreover, if CD4 cell count is over 500 copies/ml mortality rates are the same to those in general population.
• If pregnant women living with HIV have access to antiretroviral drugs, the risk of transmitting the virus to their children is virtually eliminated.
NEW CASES IN SPAIN AND CATALONIA

2012: 3,210 NEW INFECTIONS IN SPAIN AND 483 IN CATALONIA ➔ 85% WERE MEN.
AVERAGE AGE ➔ 36 ANYS

MEN WHO HAVE SEX WITH MEN ➔ 51%
IMMIGRANTS ➔ 42%

In our country, the only population group in which the number of new cases is increasing every year is men who have sex with other men.
48% of cases are diagnosed late when the immune system is already weakened. We must continue to ensure access to healthcare for vulnerable groups, providing them with information on the centres where they can be tested, as well as information from primary and secondary prevention measures.

Currently, in industrialized countries, diseases arising from premature aging [osteoporosis, lipid metabolism disorders, malignancies, renal failure, cardiovascular disease, cognitive impairment or frailty syndrome, for example] are the main clinical problem for people with HIV.

**SOURCES**

WHAT DOES THE FIGHT AIDS FOUNDATION DO?

MISSION

- To offer the best human and health care to people with HIV.
- To conduct independent and competitive research in the field of HIV infection.
- To transfer the knowledge acquired to society and to healthcare professionals.

QUALITY POLICY

The Fight Aids Foundation renewed its ISO 9001:2008 certification in November 2013. It was achieved for the first time in 2006 as a result of the Foundation’s commitment to quality and continuous improvement of all its activities.
WHAT DOES THE FIGHT AIDS FOUNDATION DO?

HEALTHCARE

2013 DATA: 2,665 patients 15,764 visits

<table>
<thead>
<tr>
<th>Service</th>
<th>10,841 visits</th>
<th>1,798 visits</th>
<th>1,516 visits</th>
<th>583 visits</th>
<th>481 visits</th>
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<tbody>
<tr>
<td>PHYSICIANS</td>
<td>196 first</td>
<td>220 first</td>
<td>40 first</td>
<td>51 first</td>
<td>35 first</td>
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<tr>
<td>PSYCHOLOGY</td>
<td>10,645 visits de follow-up</td>
<td>1,578 de follow-up</td>
<td>1,476 follow-up</td>
<td>532 follow-up</td>
<td>446 follow-up</td>
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<tr>
<td>NUTRITION</td>
<td>1.516 (40 first, 1,476 follow-up)</td>
<td>1.516 (40 first, 1,476 follow-up)</td>
<td>1.516 (40 first, 1,476 follow-up)</td>
<td>1.516 (40 first, 1,476 follow-up)</td>
<td>1.516 (40 first, 1,476 follow-up)</td>
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<tr>
<td>PSYCHIATRY</td>
<td>583 (51 first, 532 follow-up)</td>
<td>583 (51 first, 532 follow-up)</td>
<td>583 (51 first, 532 follow-up)</td>
<td>583 (51 first, 532 follow-up)</td>
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<td>GYNECOLOGY</td>
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<td>481 (35 first, 446 follow-up)</td>
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<tr>
<td>SOCIAL CARE</td>
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<td>545 (59 first, 486 follow-up)</td>
<td>545 (59 first, 486 follow-up)</td>
<td>545 (59 first, 486 follow-up)</td>
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</tr>
<tr>
<td>NURSING</td>
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<td>29,457 (trials, treatments, analytics, etc.)</td>
<td>29,457 (trials, treatments, analytics, etc.)</td>
<td>29,457 (trials, treatments, analytics, etc.)</td>
<td>29,457 (trials, treatments, analytics, etc.)</td>
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<tr>
<td>FIBROSCAN</td>
<td>384 hepatic elastographies.</td>
<td>384 hepatic elastographies.</td>
<td>384 hepatic elastographies.</td>
<td>384 hepatic elastographies.</td>
<td>384 hepatic elastographies.</td>
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<tr>
<td>PROCTOLOGY</td>
<td>1,662 (1,056 cytologies, 383 anuscopies, 117 post chirurgic controls, 106 treatments with infrared).</td>
<td>1,662 (1,056 cytologies, 383 anuscopies, 117 post chirurgic controls, 106 treatments with infrared).</td>
<td>1,662 (1,056 cytologies, 383 anuscopies, 117 post chirurgic controls, 106 treatments with infrared).</td>
<td>1,662 (1,056 cytologies, 383 anuscopies, 117 post chirurgic controls, 106 treatments with infrared).</td>
<td>1,662 (1,056 cytologies, 383 anuscopies, 117 post chirurgic controls, 106 treatments with infrared).</td>
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OVERALL VIEW OF THE SERVICE IN 2013

<table>
<thead>
<tr>
<th>Category</th>
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<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Waiting time</td>
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<td></td>
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<td></td>
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<tr>
<td>Visit time</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Information received</td>
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<td></td>
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<tr>
<td>General evaluation</td>
<td></td>
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</tbody>
</table>

THE FOUNDATION CONTINUOUSLY ASSESSES QUALITY OF CARE BY MEANS OF SATISFACTION SURVEYS THAT ARE ADMINISTERED TO USERS. THESE SURVEYS ASSESS DIFFERENT PROFESSIONALS IN PARTICULAR AND THE UNIT IN GENERAL.
A person with HIV comes to the HIV Unit at Germans Trias i Pujol Hospital either on their own initiative or by referral from another hospital service, primary health centre or community centre. Once in the Unit, the person can access the SERVICES OF EXPERTS IN VARIOUS DISCIPLINES who act together to provide the best possible care. All staff members are constantly in touch to determine what actions each person requires specifically in the area of healthcare, treatment, or to propose participation in a clinical study. The services offered are diverse, ensuring personalized ATTENTION AND QUALITY:

- **MEDICINE**: HIV infection and associated disorders diagnosis and follow-up, advice and counselling in cases of accidental exposure to HIV, monitoring and supervision of clinical trials.
- **NURSING**: blood tests, outpatient treatment, training for self-administration of drugs, advice and counselling, monitoring and supervision of clinical trials.
- **PSYCHOLOGY**: emotional support for patients and those close to them, psychological treatment, support in adherence to treatment, neuropsychological assessment.
- **NUTRITION**: nutritional assessment and intervention.
- **SOCIAL WORK**: information, advice and finding resources for the HIV patient.
- **GYNAECOLOGY**: control and treatment of gynaecological aspects in HIV-positive women.
- **PSYCHIATRY**: diagnosis and treatment of psychiatric problems related to HIV infection.
• **PROCTOLOGY**: control and treatment of anal diseases related to HIV, in particular those caused by the human papillomavirus.
   Since 2005, the Foundation has provided screening, diagnosis, monitoring and treatment of lesions caused by the human papillomavirus in HIV-positive men and women. Germans Trias i Pujol University Hospital is one of the first hospitals in Europe to offer regular proctology care for people with HIV and treat pre-cancerous lesions detected by infrared rays, a technique that eliminates the lesion on an outpatient basis without hospitalization or surgery.

• **CONDUCTING VARIOUS TESTS** to help establishing a diagnosis: assessment of the state of the liver (hepatic elastography with FibroScan), tests to assess cardiovascular risk (measured by pulse wave velocity or VOP) and to determine bone density and body composition (DEXA technique), etc.
   Since 2007, the Foundation has used FibroScan to perform hepatic elastographies in patients co-infected with HIV and hepatitis C. These tests, similar to an ultrasound, can assess the different degrees of liver fibrosis avoiding biopsies, which are more invasive and aggressive.

• **COORDINATED CARE** with other hospital services such as the plastic surgery department (treatment of lipodystrophy-related problems), ophthalmology specialists and the pain clinic.
RESEARCH at the Foundation is organized into lines that allow greater specialization of professionals and better use of resources. This diversification makes it possible to face the different challenges posed by HIV.

Researchers from each of the lines are, at the same time, professionals engaged in healthcare, which is why research is carried out that is tailored to the needs of people with HIV who they work with every day.

We work with the world’s most prestigious research centres and publications by our researchers are among those with greatest international impact.

In 2013, 74 clinical studies have been conducted in the HIV Unit and the Fight AIDS Foundation which seek to answer unresolved questions: they include all phases of clinical trials, observational studies and cohort studies.

More information in the corresponding attachment.
CLINICAL VIROLOGY

Virology is the study of viruses: their structure, classification and evolution, the way they infect and take advantage of target cells to reproduce themselves, their interaction with guests, their immunity, the disease they cause, techniques to isolate and cultivate them and their therapeutic use.

The clinical virology line at the Foundation studies the characteristics and functioning of HIV that lead the infected person to become sick.

HIV is a retrovirus: it contains genetic information in RNA, and needs the DNA of a host cell for its reproduction. When the virus penetrates into the body, it begins to replicate itself and adheres to T-cells [mainly CD4 cells] of the immune system. The virus also infects other cells such as dendritic cells and those of the central nervous system.

Some parts of HIV change very quickly once inside the body of the infected individual: this sudden change, called mutation, affects the ability of the immune system to recognize the virus. Indeed, the great ability of HIV to mutate is one of the aspects that make it particularly difficult to find an effective vaccine. Similarly, mutations can make the virus resistant to antiretroviral drugs: when resistances appear the viral load (amount of HIV in the blood) begins to rise. To cope with this increased amount of virus the therapy should be modified and the development of resistances leaves patients gradually without treatment options.
“The Guide” app: every year the Foundation publishes “The HIV & Hepatitis Drug Resistance and PK Guide”, a guide in English drawn up by international experts that provides comprehensive and updated information on mutations of HIV and hepatitis and resistance treatment. It is an extremely useful tool for clinical management. In December 2012 an application for mobile devices was launched: it offers the ability to access this information instantly and simply. It is available for free at the Apple Store [The HIV & Hepatitis Drug Resistance and PK Guide] and the Android Market [The HIV & Hepatitis Guide]. More information at www.flinka.org/theguide.
Several studies have been published on monotherapy with protease inhibitors (one of the components of HIV that the virus needs to complete its replication process). In the last decade there has been great progress in the simplification of antiretroviral treatment. Reductions in the number of daily doses and pills to take, the once-daily dosages (monotherapy) and the reduction of the toxic effects of drugs among other improvements have radically facilitated adherence to treatment.

1. It has been demonstrated that the new techniques of mass sequencing of the virus may help doctors to predict which treatment will work best for each patient. The possibility to analyze more accurately the characteristics of the type of HIV that affects each person (especially those affected by minority variations or multi-resistant virus) is an important step to improve medical care and makes it possible to provide more effective, safer and personalized medicine.

2. Researchers have collaborated on a project of the Institute for AIDS Research IrsiCaixa and the American Foundation for AIDS Research (AMFAR) to study which variants of HIV escape the effect of a therapeutic vaccine that is currently being tested. This information will allow an improvement in the design of future vaccines.

3. The line of clinical virology has been active in updating the IAS-USA (International Antiviral Society) resistance guideline, which is the most accessed in the world, and the Spanish tropism guides that are useful for clinical management of patients. Collaboration with the WHO (World Health Organization) Group of Resistances has also continued to assess the implications of resistance in developing countries.

4. The Fight Against Aids Foundation and IrsiCaixa have started a new line of research to analyze how the imbalances in the composition and function of intestinal flora (microbiome) affect both the chronic inflammatory condition of people with HIV and the fragility of the person in general. In the case of people with compromised immune systems, such as people with HIV, the study of the influence of the microbiome on the immune system may be key to improving quality of life and increasing defenses to fight the infection. Similarly, a healthy microbiota could ensure better quality and less fragile aging. The goal of researchers is to obtain relevant data to prevent disease and improve health through nutritional interventions and changes in diet.

More than 99% of “our” genetic information is actually information from the millions of microbes that inhabit our bodies, our microbiota. It seems increasingly likely that this “second genome” as it is called sometimes exerts a great influence on our health, perhaps an even greater influence than is exerted by the genes we inherit from our parents. Inherited genes are more or less fixed, unchanging; however, it seems that the second genome carried by microbiota can be remodelled and even regenerated.
TOXICITY AND NEW TREATMENT STRATEGIES

The Toxicity and New Treatment Strategies line focuses on identifying the adverse side effects of antiretroviral treatment and other complications associated with the virus itself and with the inflammation caused by HIV. This research line determines the frequency and causes of these side effects, and their prevention and treatment. In addition, researchers also look for alternative HIV treatments that may be better tolerated or easier to follow.

The immune system of people with HIV is permanently activated to combat the effects of the virus: this involves chronic inflammation that can cause harmful effects on the body, such as cardiovascular or renal problems.

DURING 2013

CARDIOVASCULAR RISK

Compared to the general population, people with HIV suffer more cardiovascular disease. Each antiretroviral drug has a different impact on metabolic alterations and therefore it is better to use those that affect them less, especially in patients with other risk factors. It is also important to understand each person’s genetic predisposition to suffer such complications.

1. A study performed at the Foundation with 467 people with HIV shows that there are different genetic variations that predispose to protect or to develop atherogenic dyslipidemia, a situation of particular cardiovascular risk in which the person has very high levels of triglycerides and very low HDL (the “good cholesterol”). It is also observed that some of these genetic variants involved in the development of atherogenic dyslipidemia can also influence the balance of the immune status of people with HIV. The results of this research project will be published during 2014.
2. The results of a study conducted to determine the role of arterial stiffness in cardiovascular risk have been published. Comparing the results in people with HIV to the general population, no differences were observed in arterial elasticity: none of the variables related to HIV (CD4 cell count, viral load, etc.) was related to arterial stiffness, probably due to the good immunological and virological status of participants. However, high levels of triglycerides and high diastolic pressure when determining pulse wave velocity were indeed considered risk factors. Pulse wave velocity (PWV) is a technique to assess cardiovascular risk that allows the detection of incipient alterations: it is calculated from the time it takes the pulse wave to propagate through the arterial system, from the carotid to the femur, with greater speed indicating more stiffness.

3. A study that aims to evaluate the endothelial toxicity (the endothelium is the tissue that forms the wall of our intestines) of two families of antiretroviral drugs has begun: protease inhibitors and reverse transcriptase inhibitors not analogous to nucleosides. This kind of toxicity will be evaluated by cultivating human endothelial cells with different doses of these antiretroviral drugs (“in vitro”).

4. A new treatment strategy has allowed the improvement of the levels of cholesterol and triglycerides in patients who introduced the drug called maraviroc in their therapy.

**RENAŁ DISORDERS**

Renal disorders are more and more common in people with HIV. This is related mainly to the increase in life expectancy and the corresponding aging of the population with HIV, but also with the rise in diseases such as hypertension or diabetes mellitus. Moreover, some antiretroviral drugs can worsen kidney functioning especially when there are other coexisting pathologies or other treatments also toxic to this organ.

1. In collaboration with the Nephrology and Biochemistry Laboratory at Germans Trias i Pujol Hospital, renal control measures are being implemented considering the particularities of people with HIV, adapting them to new needs and the latest recommendations in clinical guidelines.

2. Also in collaboration with the nephrology service, a study to assess the frequency and characteristics of renal disorders in nearly 1,000 patients seen in the HIV Unit has been conducted. In our cohort of patients, advanced renal disease is rare (less than 1%), but in contrast almost 50% of subjects showed some renal disorder even without suffering a fully established renal disease. In this study, factors associated with an increased risk of suffering such abnormalities were the presence of hypertension and aging. On the other hand, higher CD4 counts were a protective factor.

3. In renal toxicity associated with certain drugs, our group unveiled the findings of a study to assess the reversibility of this toxicity in patients who interrupt treatment with tenofovir. The results showed that 59% of participants normalize impaired renal function, while 10% only partly recover it and the rest do not reverse the toxicity.
4. Currently researchers are studying the presence of different proteins in blood and urine that may vary depending on the type of kidney disease that the subject presents. In patients where a renal biopsy is indicated for better diagnosis, experts will try to establish relationships between the study of proteins and their biopsy results.

**BONE TOXICITY**

Regular checks are performed on people who attend the HIV Unit to obtain information on their bone mineral density and to detect problems such as osteoporosis using the DEXA technique, performed with a device that emits very low doses of X-rays.

1. Researchers have published the results of a study that evaluated the peak bone (the highest point of bone mineral density presented in life) in young adults aged 20 to 30 compared with people with HIV in the general population. The study shows that young people with HIV have a lower peak bone, although the percentage of HIV-negative people with low bone mineral density was surprisingly high.

2. The effects of different strategies to try to recover the loss of bone mineral density are being studied, such as the administration of drugs for osteoporosis (zoledronate) or the replacement of some antiretroviral drugs by others less involved in bone loss (changes from protease inhibitors to integrase inhibitors such as dolutegravir, for example).
**CLINICAL PHARMACOLOGY**

Clinical Pharmacology is a medical specialization that assesses the effects of drugs on patients, both in the general population and in specific patients or patient groups. It focuses on the relationship between drug levels in the blood and their therapeutic effects: it is necessary to know what the appropriate levels are to obtain the desired effects.

This line investigates mainly how antiretrovirals behave in the body, and also how they interact with each other (antiretroviral therapy combines different drugs) and with other medications commonly used in HIV-positive patients.

Antiretrovirals are classified into several families according to how they inhibit the HIV replicative cycle. In antiretroviral therapy, combinations of drugs belonging to different families hinder the development of drug resistance mutations and maintain suppressed viral load.

**DURING 2013**

1. Researchers have worked on optimizing the doses of antiretroviral drugs, evaluating the efficacy and safety of dose reduction strategies of a protease inhibitor. These strategies, in which a lower amount of drug is administered, aim to optimize the efficiency (cost/benefit) of treatment and maximize the use of available resources. Accordingly, the DRV600 trial was conducted: its aim was to evaluate the efficacy of two antiretroviral drugs (darunavir in combination with ritonavir) in lower doses than those approved.

2. Collaboration in international studies to evaluate the safety of antiretrovirals and possible changes in the concentration of these drugs in the blood in pregnant women is continuing. The study of the pharmacokinetics in this population in particular is essential because a reduction in the concentration of drugs during pregnancy could increase the risk of treatment failure and consequent HIV transmission to the baby.

3. A new area of research has emerged involving the use of various computer programs to simulate the possible drug interactions in patient populations that are difficult to study in the clinical setting, such as people with HIV who are receiving cancer chemotherapy and antiretroviral therapy at the same time.
COINFECTION BY HEPATITIS AND COHORTS

HIV-positive patients with weakened immune systems can suffer from opportunistic infections. These are illnesses related to the progression of the disease and the development of AIDS as a result of the weakening of the body’s defenses.

Thanks to the availability and great extent of antiretroviral treatments, opportunistic disease rates have gone down gradually and people with HIV have been increasing their quality of life and life expectancy.

Having a longer life and aging with HIV involve a series of new complications. One of these is to fight coinfection with other viruses such as hepatitis. In fact, viral hepatitis is considered one of the leading causes of death among HIV-positive people. The main complications of chronic infection by hepatitis C are cirrhosis and liver cancer.

Many HIV-positive people have to fight both infections at the same time. It is essential to advance in the understanding of the factors that lead a person to present hepatic complications in order to be able to prevent, diagnose and treat them.

Regarding cohorts (groups of patients), the Foundation mainly focuses its activity on participating in multicenter studies from a national and international perspective, such as the PISCIS cohort study (Catalan), CoRIS cohort (Spanish) and Eurosida cohort (European).
DURING 2013

1. Participation in the ESTAMPA study, a multicenter study on the prevalence of hepatic steatosis (fat infiltration in the liver) with FibroScan evaluation.
2. The impact of the severity of liver fibrosis on the evolution of infection by hepatitis C is being assessed.
3. Participation in the development of European guidelines (EACS: European AIDS Clinical Society) on the control of HIV-infected people who are co-infected with hepatitis B or C.
4. Genetic markers and resistance patterns associated with hepatitis C treatment are being studied.
5. Researchers have actively participated in international multicenter clinical trials to test new drugs (HCV protease inhibitors) that can increase therapeutic effectiveness in the treatment of HCV up to a 75% cure rate.

Cohort follow-up:

The PISCIS cohort: this cohort provides information on patients with HIV/AIDS visited since January 1 1998 in different hospitals in Catalonia and the Balearic Islands. Results of monitoring of this cohort have showed increased mortality in patients with HIV infection due to cancers and cardiovascular and liver diseases not related to HIV.

Participation in the European multicenter PROBE-C study, funded by NEAT [European AIDS Treatment Network]: a cohort of patients from several centres in Europe has been established to collect data on the natural history and treatment of coinfection between HIV and hepatitis C. In addition to the information that this cohort will provide to experts, the PROBE [Prospective Observational Evaluation] study will be an excellent platform to evaluate the clinical safety and efficacy of various treatment strategies.
COINFECION BY THE HUMAN PAPILOMAVIRUS AND OPPORTUNISTIC INFECTIONS

In HIV-positive people with a weakened immune system, opportunistic infections can emerge which are diseases related to the progression and the development of AIDS due to lower defenses.

Infection by the human papillomavirus (HPV) is the most common sexually-transmitted infection: 75% of the general population will acquire it during their lifetimes. In general, the body eliminates HPV naturally without causing any injury. But in people with weakened immune systems, the virus can cause the development of cancer precursor lesions that in the worst cases could evolve into cancers (mainly in the cervix and anus).

Results obtained in these almost 10 years of preventive medicine and research show a high percentage of people with HIV co-infected with HPV. Figures show the need to implement routine tests for the detection of human papillomavirus in men and women with HIV, regardless of their sexual practice.
1. In early 2013 a paper on the efficiency of infrared treatment of high-grade dysplasia lesions in the anus in both men and women was published.

2. Publication of the results of a comparative study among men who have sex with men (MSM) and heterosexual men about the presence of HPV in the mouth, penis and anus, noting its prevalence, incidence and elimination. The fact of having data on heterosexual men is a novelty because this population had not been considered in previous studies.

3. From clinical practice with the cohort called CARH-MEN (538 men who have sex with men and 195 heterosexual men) it is observed that 5% of these men have cancer precursor lesions (high-grade dysplasia) caused by persistent papillomavirus, likely to be treated.

4. The CHECK-EAR study is continuing, collecting data on the prevalence of the papillomavirus and other STIs among men who have sex with men who are HIV negative. The study is being conducted under HIVACAT, the program for the research and development of an HIV vaccine in Catalonia. The study is being carried out with the support of the Fight Against Aids Foundation, BCN Checkpoint (a community centre run by the Projecte dels Noms-Hispanosida Association), the Clinic Foundation and the Institute for AIDS Research IrsiCaixa.
IMMUNOLOGY AND VACCINES

The Immunology and Vaccines research line tracks patients participating in studies with immunomodulators (the kind of drugs that stimulate the growth and production of the body’s defenses) and coordinates the clinical application of HIVACAT projects, the program for the research and development of an HIV vaccine in Catalonia.

HIVACAT is carried out through a public-private consortium unprecedented in Spain placing our country at the forefront of the international research conducted in this area. Consisting of the Institute for AIDS Research Irsicaixa and the AIDS and Infectious Diseases Service of the Barcelona Clinic Hospital, HIVACAT investigates the development of a new HIV vaccine in coordination with Esteve and with the support of “la Caixa”, the Departments of Health and Innovation and Universities and Enterprise of the Government of Catalonia, and the Clinic Foundation.

In its first five years of operation, the HIVACAT program has been consolidated and is recognized internationally: in 2013 it was the local organizer of the AIDS Vaccine 2013 conference, the largest and most prestigious in the world focused exclusively on HIV vaccine research. More information at www.hivacat.org and www.vaccine-enterprise.org/conference/2013/.

An effective vaccine provides the immune system with tools to fight against a particular microorganism and prevent it causing disease. Although there is currently no vaccine to prevent or treat HIV, researchers are preparing and testing experimental vaccines against this virus. HIV vaccines that are used to prevent the infection are called preventive vaccines. The ones used to help control the virus in people who are already infected are therapeutic vaccines.
1. The generation of therapeutic vaccine candidates based on the induction of cellular responses against HIV has been completed. In 2013 trials in animals (rats and monkeys) with promising results presented at the World Vaccine Congress 2013 have been performed. Researchers are currently working on generating the first stocks and testing toxicity to perform the first human trial, scheduled for 2015. Simultaneously, two teams at the Clinic Hospital and Irsicaixa are working on the development of vaccines for the induction of specific antibodies as a model of preventive vaccine. These designs are in a more initial phase of development (experiments on mice).

Antibodies generated by the organism to deal with the presence of a virus may be the key to block infection in a healthy person. In fact, virtually all the effective preventive vaccines we know so far work because they are able to induce antibodies that protect against pathogens. When a person is infected with HIV, it seems that the antibodies generated are not good enough to fight the infection. In this situation, the body needs to eliminate cells that have been infected by a cell type immune response: the therapeutic vaccine model of cell type aims to control viral load and prevent the progression of disease without antiretroviral treatment.

2. The cohort of elite controllers (individuals who are able to keep HIV under control without continued antiretroviral therapy) is kept in collaboration with Vall d’Hebron Hospital in Barcelona and some of the city’s prisons. In addition, the Late progressors or Losers project examines the factors that cause patients who have controllers of the virus to lose this privileged condition.

3. Data from the ERAMUNE eradication clinical trial has been presented. It was a trial to evaluate whether intensification of antiretroviral therapy together with the administration of an immunomodulator (Interleukin-7) was effective in reducing viral reservoirs. This was a multicenter study in which groups from Paris, London, Milan and Barcelona have taken part. The results so far indicate that although immune activation with interleukin is generated, it fails to reduce the amount of viral reservoir.

**VIRAL RESERVOIRS ARE HIV-INFECTED CELLS THAT REMAIN DORMANT DESPITE ANTIRETROVIRAL THERAPY.**
Clinical trials of therapeutic vaccines
• Patient enrolment for a clinical trial to test the safety and immune response of two new candidates for a therapeutic vaccine developed by researchers at Oxford has been completed. These vaccines are unique for two main reasons. Firstly, one of the candidates uses a virus derived from the common cold of chimpanzees as its vehicle. The difference between the animal virus and the human one could be key to ensure antibodies do not block the vaccine thus achieving a greater response. Secondly, these vaccines try to stimulate the immune system to attack what they believe represents the Achilles heel of HIV, the most conserved regions (parts of the virus that suffer fewer mutations). The population involved in the study is people with a recent HIV infection who have started antiretroviral treatment at an early stage.
• During 2013 the follow-up of patients who have participated in the RISVAC03 clinical trial, in collaboration with Barcelona Clinic Hospital and Gregorio Marañón Hospital in Madrid, was completed. The trial results, which were launched at AIDS Vaccine 2013, indicate that although there was a stimulation of the immune response, the vaccine was not effective enough to control viral rebound after patients stopped antiretroviral treatment.
• Thanks to the platform created by HIVACAT to test vaccines, the Foundation participates in studies promoted by external developers such as TH-HIV11 or Vacc-4x in which the effects of vaccine candidates that allow the control of the virus in the absence of treatment are evaluated.
• Researchers at the Fight Against Aids Foundation and IrsiCaixa are involved in a new European project to find a therapeutic vaccine for HIV called iHIVARNA and directed by Barcelona Clinic Hospital. Its goal is to test the effectiveness of a new candidate, an innovative concept of vaccine that aims to stimulate dendritic cells in the body. The project includes clinical trials with the vaccine candidate in 2015. More information at www.ihivarna.org.
PSYCHOLOGY

People with HIV, as well as those living with other chronic diseases, require comprehensive care that includes psychological assistance. The Foundation, in addition to providing it, promotes the psychotherapeutic approach to the emotional difficulties that must be faced by people with HIV and the people around them, and conducts studies focused on improving the quality of life of those affected.

Research in the Psychology line focuses on the study of disorders in people with HIV that can be caused by problems related to chronic infection and aging, on the early detection of cognitive and psychomotor impairment, and on the effects of psychological stress on the immune function.

DURING 2013

1. Two papers were presented at the 24th National Congress on AIDS - 11th International Conference AIDS Impact describing the benefits of mindfulness and a cognitive behavioural program for the quality of life, emotional status and immune status of people with HIV. The results of the cognitive program were obtained from a study developed and implemented by a team of professionals from all around Spain (FIPSE grant, Foundation for Research and Prevention of AIDS in Spain).

Mindfulness is the ability to be consciously connected with the present. Many times, our mind tends to operate in a mode that could be called “autopilot” without paying attention to our experiences: with a practical discipline similar to meditation, we can switch to a “full consciousness” mode. So we can learn to accept emotions, thoughts and feelings that arise from our experience without judging them, being more compassionate with others and especially with ourselves.

2. Publication of a study presenting the NEU instrument, a tool for detecting cognitive impairment in patients with HIV. The NEU requires less than 10 minutes to be applied when usually neuropsychological evaluation methods require two or three hours. Following the indicated paper-based footsteps, the patient is asked to perform certain tasks to measure the speed of information processing, executive functioning and verbal fluency. A tool like this had never been presented in Spain before, and its usefulness has been recognized internationally.
With the development of antiretroviral therapies and the increased life expectancy of people with HIV, there have been important advances in understanding the effects that the virus itself and the medication may have on the central nervous system. From the first weeks of infection, HIV can cause alterations at a motor and cognitive level, with a large negative impact on the quality of life and daily functioning of those affected.

3. Publication of the results of a multicenter study (the first of its kind in Spain) in which the prevalence of cognitive complaints in people with HIV with several demographic and clinical characteristics has been evaluated. The findings show that symptoms of cognitive impairment are common in people with HIV, and that this fact is related to the patient’s immune and emotional states.

4. José A. Muñoz-Moreno was one of the lead researchers in the international MIND Exchange project, created to provide specific recommendations for the diagnosis, monitoring and treatment of neurocognitive disorders associated with HIV. Over sixty specialists from various disciplines and backgrounds participated in the project to reach the first consensus among experts on this subject worldwide.

5. During 2013 the implementation of the TRIANT-TE study has continued. Its aim is to improve neurocognitive disorders in people with HIV. Specifically, researchers want to compare the efficacy and safety of two different pharmacological strategies. The project is in its final phase and its first results will be analysed soon.
NUTRITION

Diet has been shown to be a vitally important factor from the early stages of HIV infection. Even though a good diet plays no role in the prevention of HIV and will not cure AIDS, it can contribute to a patient’s treatment and improve their quality of life: a balanced diet reinforces the immune system and helps the body combat the possible effects of the disease.

1. Diet and nutritional assessments of patients have been ongoing, offering them specific dietary advice for each situation.
2. Based on this line, the Foundation participates in numerous clinical trials conducting dietary, nutritional and anthropometrical evaluations (diet control, assessment of the benefits that nutrients have for the body, and measurement of different parts of the body such as the waist, hips or arms).
3. Assessment of the composition of the tissues of the body using techniques such as bioelectrical impedance, which measures it by assessing the resistance presented by body tissues to soft electrical currents which are imperceptible to the patient.
4. Measurement of bone mineral density: using the DEXA technique, a device that emits very low-level X-rays. This is useful for detecting conditions such as osteoporosis.

The study of body composition is an important aspect in the assessment of nutritional status because it allows quantifying the body reserves of the organism and therefore detecting and correcting nutritional problems and situations of overweight, obesity or, on the other hand, malnutrition. The measurement of body composition by densitometry [DEXA] can provide assessment going beyond weight and the traditional body mass index [BMI] to determine body fat distribution.
MONITORING CLINICAL STUDIES

Study monitors are qualified professionals with specific training in the management of clinical trials: they monitor the progress of the trial from its inception to the presentation of the results.

Their job consists of:
- Supporting the drafting of the protocol and the documentation for each specific project.
- Obtaining the necessary legally-required approvals according to the study and prevailing legislation.
- Preparing and maintaining the sponsor and investigator files.
- Making start, monitoring [protocol follow-up] and closure visits to participating centres.

Although originally only trials related with HIV were conducted, the expertise of the team enabled it to manage studies in other therapeutic areas led by external investigators or promoters (neurology, cardiology, hepatitis B, hemodynamics, pharmacology, etc.). Since 2008, we have operated with a more generic name, FLS-Research Support.

STATISTICS

The statistics team contributes to the research projects at the Foundation by applying the necessary statistical techniques and methods at each stage of a project. It participates in the design of the studies, monitors data collection, and lastly analyses the results and presents conclusions.

During this year special attention has been paid to exploring and applying pharmacoeconomic tools in the evaluation of different therapeutic strategies.

Through an educational cooperation agreement with the Universitat Politècnica de Catalunya (UPC), students at the university are encouraged to complete their training at the Foundation. Additionally, the relationship with the UPC means the Foundation has the opportunity to work with the most modern techniques and the latest advances.
RESEARCH GRANTS AND FINANCIAL HELP

Multicenter study on the quality of life of people with HIV and the efficacy of psychotherapeutic intervention.

- FIPSE grant (Foundation for AIDS Research and Prevention in Spain)
- Researcher: Carmina R. Fumaz.

TRIANT-TE Study: A prospective randomized controlled study to compare the efficacy and safety of two different pharmacological strategies on neurocognitive disorder in HIV infection.

- CAIBER grant (Consortium for Biomedical Networking Research Support)
- Project funded by the Ministry of Health and Social Policy of Spain in the 2010 call for funding to promote independent clinical research.
- Researcher: José A. Muñoz- Moreno.

Clinical trial to evaluate the efficacy, safety and economic impact of reduced doses of darunavir in HIV-infected patients treated with darunavir/ritonavir once daily.

- Ministry of Health and Social Policy of Spain: funding to encourage the uptake of the therapeutic application of orphan medicines for human and advanced therapies.
- Project funded by the Ministry of Health and Social Policy of Spain in the 2011 call for funding to promote independent clinical research.
- Researcher: José Moltó.

Open multicenter randomized study on the efficacy and safety of removing inactive nucleoside and nucleotide analogues or intermediate resistance in subjects with HIV-1 treated with multiple drugs and with viral suppression.

- Ministry of Health and Social Policy of Spain.
- Project funded by the Ministry of Health and Social Policy of Spain in the 2011 call for funding to promote clinical independent research.
- Researcher: Josep M. Llibre.
OSTEODOLU: Multicenter study to assess changes in bone mineral density change produced by changing protease inhibitors to dolutegravir in HIV-1-infected subjects with low bone mineral density.
- ViiV Healthcare, pharmaceutical company specialized in HIV.
- Researcher: Eugènia Negredo.

- Contura, Aquamid® gel manufacturer.
- Researcher: Eugènia Negredo,

PROTEST: Utility of genotypic tropism of HIV-1 from proviral DNA to guide treatment with CCR5 antagonists in subjects with undetectable HIV-1 viral load.
- ViiV Healthcare, pharmaceutical company specialized in HIV.
- Researcher: Roger Paredes.

- ViiV Healthcare, pharmaceutical company specialized in HIV.
- Researcher: Bonaventura Clotet.

TULIP: Prospective, randomized, crossover, double-blind, placebo-controlled clinical trial to evaluate the effect of co-formulation of tenofuiv/emtricitabine vs. placebo on reducing lipids in patients infected with HIV-1 with dyslipidemia and sustained virologic suppression receiving monotherapy with protease inhibitors boosted with ritonavir.
- Gilead Sciences.
- Researcher: Bonaventura Clotet.
In the area of **EDUCATION**, the Foundation focuses especially on training specialists in HIV and facilitating knowledge transfer between health professionals and researchers. Dissemination of knowledge among the general public is also one of our goals.

**Training of pre-doctoral and post-doctoral students and researchers.**

- Several university students have done their internships at the HIV Unit in 2013 in areas such as medicine, dietetics, statistics and monitoring of clinical studies.
- Currently, the following theses are in progress:
  - **Núria Pérez-Álvarez. Economic evaluation in health research: methodological development, cohort simulation, and applications.**
    - Universitat Politècnica de Catalunya, Doctoral Program: Department of Statistics and Operative Research.
    - Supervisors: Guadalupe Gómez and Roger Paredes.
  - **Patricia Echeverría. Comparative study of the changes induced in the liver and lipid profile of HIV patients treated with protease inhibitors (PIs) and their relationship to cardiovascular risk.**
    - Supervisors: Eugènia Negredo and Bonaventura Clotet.
  - **José Ramón Santos. Simplification strategies and impact of mutations in antiretroviral therapy in patients infected with HIV-1.**
    - Supervisor: Bonaventura Clotet.
    - Tutor: Jordi Tor
Organization and participation in symposia, conferences and seminars for scientific and clinical update:

- **Post-CROI**: The Foundation organizes this annual event, which is a summary of the highlights of the CROI ([Conference on Retroviruses and Opportunistic Infections](https://www.cROI.org)), one of the most important conferences on HIV/AIDS worldwide. This meeting is one of the most relevant in Spain, known for its quality and high attendance. It is held with the support of Gilead, and the presentations of the speakers are available at [www.flsida.org/post-croi-2014](http://www.flsida.org/post-croi-2014).

- **Workshop on eradication, vaccines and immunological recovery in HIV**: sixth meeting with Dr. Mario Stevenson, from the University of Massachusetts, and other experts in this field. Sponsored by MSD.

- **Teleconferences on resistances**: these have been held regularly since 2004 and are telephone sessions during which clinical cases involving resistance to antiretroviral treatment are discussed. The procedure is highly practical: the participating hospitals send a clinical case and decisions have to be made on the most suitable treatment according to the patient’s profile, their medical history, etc. Three experts assess these cases prior to the teleconference: Dr. Jonathan Schapiro (Stanford University), Dr. Santiago Moreno (Ramón y Cajal Hospital) and Dr. Bonaventura Clotet (Germans Trias i Pujol Hospital). During the teleconference, all the participants discuss the case and reach a conclusion. This is a particularly useful resource for centres with few HIV specialists and an important teaching tool for resident and student doctors. Gilead and Janssen support them.

- **Resistances workshop**: the course was conducted with the aim of reviewing the main paths for developing resistances to each of the families of antiretroviral drugs currently used. It contained classes, practical discussion of real clinical cases of patients with virological failure, and a visit to the Retrovirology Laboratory of the Institute for AIDS Research IrsiCaixa in order to see where researchers work. Sponsored by BMS under the HIV Academy project.

- **9th Meeting on the adverse effects of antiretroviral treatment / 5th HIV Update Workshop**: chaired by Dr. Enric Pedrol from Sant Pau i Santa Tecla Hospital in Tarracona, with the support of ViIV Healthcare.
The Foundation regularly organizes events and campaigns in order to increase public awareness and sensitivity towards HIV/AIDS and the stigma that surrounds it. Some of these activities also aim to raise funds to finance research projects.

"GIVE YOUR LIGHT AGAINST AIDS" CAMPAIGN

Each year in November and December the Fight Against Aids Foundation holds an awareness campaign. Since 2010, this initiative has had the support of Barcelona City Council and has two main actions: the Gala Sida Barcelona (directed by Miguel Bose) and, coinciding with World AIDS Day on December 1, the red lighting of buildings and the most important landmarks in the city.

In 2013 it was decided to go further and achieve more active participation by the public. On November 18 the web app giveyourlight.com was launched, where everyone could create their own “message of light” against AIDS.
GOALS:
- Showing solidarity with people living with HIV.
- Fighting for no new infections: 2 million are produced every year.
- Calling for scientific research to find a definitive solution to HIV/AIDS.

OPERATION:
- The participant enters the site, chooses a picture and writes a word or symbol imitating a beam of red light.
- Users determine their location [geolocation].
- Once the message is created it can be shared via social networks.
- Whenever someone “likes” a message that person is also located on the map and a connection is created.

As people participate and interact with other posts, a large network emerges: light against AIDS “travels” around the world connecting thousands of people.

On December 15 2013 the first phase of the campaign ended. All light messages created until then will soon be sent to three international institutions that are crucial in combating AIDS: UNAIDS, the European Parliament and the Office of National AIDS Policy in the White House.

The site is still active: GIVEYOURLIGHT.COM.
GALA SIDA BARCELONA

In just a few years the Gala Sida Barcelona has become one of the most important charity events in Spain.

Miguel Bosé, ambassador of the Foundation, has been the director of the Gala since its inception. The Mexican socialite Genoveva Casanova debuted as an ambassador of the Gala last year. Also in 2013 a new venue to hold the event was chosen, changing the W Hotel for the Oval Room at the MNAC, Museu Nacional d’Art de Catalunya (National Art Museum of Catalonia).

Representatives from the business, social and political realms annually attend the Gala as well as personalities from the world of entertainment in all its aspects: in total nearly 650 people. In addition, 500 people were welcomed after the dinner to enjoy a special concert featuring Miguel Bosé along with other artists.
On the occasion of the celebration of the *Gala Sida Barcelona*, the Foundation seeks to establish partnerships with other non-profit organizations involved in the fight against AIDS from different areas. Accordingly, in 2013 an agreement for collaboration with the association AID FOR AIDS, present in the United States and Latin America, was signed under which both entities agree to support each other in the accomplishment of their missions.

In 2013, thanks to attendees and sponsors (Telefónica, MAC Aids Fund, Repsol and Volkswagen at the forefront) the Gala raised more funds than ever at €610,265.
DECEMBER 1, WORLD AIDS DAY

Between 6:30 pm on December 1 and 1 am on December 2, Barcelona had a very different appearance with a large number of buildings and landmarks lit in red to commemorate World AIDS Day. In all there were 38 participating venues, including City Hall, the Arc de Triomf, Casa Batlló, the Molino, the Liceu, La Pedrera, Palau de la Música, Sagrada Familia, Torre Agbar and the National Theatre.

On the same day the “Give your light against AIDS” festival was held at Luz de Gas, with a concert by Manu Guix, Jofre Bardagí, Joan Dausà, Elena Gadel, Monica Green, Lydia Guevara, Joan Masdéu, Salva Racero and Àngel Llàcer.
BOARD
Its function is to ensure the fulfillment of the core aims of the Foundation, to assess the work carried out, to oversee management actions, and to appoint executive positions. Its members are representatives of different areas of society who, with their different sensibilities and needs, initiate new challenges for the organization.

CHAIRMAN
Bonaventura Clotet

SECRETARY AND TREASURER
Guillem Sirera

MEMBERS
Leopoldo Biete, Maria Llatjós, Caterina Mieras, Lola Mitjans, Roger Paredes, Montserrat Pinyol, Gemma Recoder, Joan Romeu, Mónica Segarra, Ricard Vaccaro, Elvira Vázquez i Anna Veiga
Carmen Alcalde
• Nurse.
• Coinfection by HPV and Opportunistic Infections Line.

Àngels Andreu
• Collaborator: Pharmacist.

Aintzane Ayestarán
• Statistics Trainee.
• Student from the Master in Statistics and Operations Research [Universitat Politècnica de Catalunya].

Anna Bonjoch
• Physician and Researcher.
• Toxicity and New Treatment Strategies Line.

Isabel Bravo
• Nurse.
• Clinical Virology Line.

Anna Chamorro
• Nurse.
• Opportunistic Infections and Coinfection by HPV Line.

Sònia Clemares
• Clerical Worker.

Bonaventura Clotet
• Physician and Researcher.
• Head of the HIV Unit and President of the Foundation.

Patrícia Cobarsi
• Nurse.
• Opportunistic Infections and Coinfection by HPV Line and Immunology and Vaccines Line.

Pep Coll
• Physician and Researcher.
• Opportunistic Infections and Coinfection by HPV Line

Crisanto Díez
• Collaborator: Head of the Psychiatry Department.

Patricia Echeverría
• Physician and Researcher.
• Toxicity and New Treatment Strategies Line.

Roser Escrig
• Clinical Trial Monitor.

Carla Estany
• Dietician.
• Head of the Dietetics Line.
Mercè Ferràndiz
  • Clerical Worker in Clinical Trial Monitoring.

Mª José Ferrer
  • Psychologist.
  • Head of the Psychology Line.

Sandra Flores
  • Clerical Worker.

Miriam García
  • Clinical Trial Monitor trainee.

Francesc Garcia-Cuyàs
  • Collaborator: Gastrointestinal Surgeon.

Sílvia Gel
  • Clinical Trial Monitor.
  • Internal Clinical Trials Coordinator.
  • Quality Manager.

Guadalupe Gómez
  • Professor of Statistics at the UPC.

Gemma Guillén
  • Head of Communication and Fundraising.

Cristina Herrero
  • Clinical Trial Monitor.

Carmen Hiquerías
  • Collaborator: Head of the Plastic Surgeon Department.

Antoni Jou
  • Physician and Researcher.
  • Coinfection by Hepatotropic Viruses Line. Cohorts.

Begoña Lemos
  • Social Worker.

Josep Maria Llibre
  • Physician and Researcher.
  • Clinical Virology Line.

Ingrid Martínez
  • Clerical Worker.

Manuel Medina
  • Collaborator: Plastic Surgeon.

Cristina Miranda
  • Nurse.
  • Clinical Pharmacology Line.

José Moltó
  • Physician and Researcher.
  • Head of Clinical Pharmacology Line.
Beatrix Mothe
- Physician and Researcher.
- Immunology and Vaccines Line.

José A. Muñoz-Moreno
- Psychologist.
- Psychology Line.

Maria Navarro
- Accountant.

Eugènia Negredo
- Physician and Researcher.
- Head of Toxicity and New Treatment Strategies Line.

Arelly Ornelas
- Statistics.

Maite Orodea
- Clerical Worker.

Roger Paredes
- Physician and Researcher.
- Head of the Clinical Virology Line.

Deborah París
- Clerical Worker.

Núria Pérez
- Statistics.

Marta Piñol
- Collaborator: Gastrointestinal Surgeon.

Ramon Planas
- Collaborator: Head of the Gastroenterology Department.

Jordi Puiq
- Nurse.
- Toxicity and New Treatment Strategies Line.
- External Clinical Trials Coordinator.

Boris Revollo
- Physician and Researcher.
- Coinfection by Hepatotropic Viruses and Opportunistic Infections and Coinfection by HPV Lines.

Carmina R. Fumaz
- Psychologist.
- Psychology Line.

Joan Romeu
- Physician and Researcher.
- Head of the Immunology and Vaccines Line.

Susana Ruiz
- Collaborator: Ophthalmologist.
Anna Salas
- Nurse.
- Coinfection by Hepatotropic Viruses Line. Cohorts.

José Ramón Santos
- Physician and Researcher.
- Clinical Virology Line.

Cristina Segundo
- Nurse.
- Coinfection by Hepatotropic Viruses and Opportunistic Infections and Coinfection by HPV Lines.

Guillem Sirera
- Physician and Researcher.
- Head of Opportunistic Infections and Coinfection by HPV Line.

Esther Soler
- Nurse.
- Coinfection by Hepatotropic Viruses Line. Cohorts.

Antoni Tarrats
- Collaborator: Gynecologist.

Jéssica Toro
- Clinical Trial Monitor.

Albert Tuldrà
- Manager.

Cristina Tural
- Physician and Researcher.
- Head of Coinfection by Hepatotropic Viruses Line. Cohorts.

Jorge Valencia
- Physician Trainee.
- Student from the Master in AIDS Pathogenesis and Treatment [Autonomous University of Barcelona and Gimbernat School of Nursing and Physiotherapy, in partnership with the Institute for AIDS Research IrsiCaixa]

Sandra Vidal
- Nurse.
- Coinfection by Hepatotropic Viruses Line. Cohorts.

Sebastià Videla
- Collaborator: Clinical pharmacologist.
**FINANCIAL AND ECONOMIC DATA**

**TOTAL OUTGOINGS:**
3.451.305.00 €

**TOTAL INCOME:**
3.406.369.01 €
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COLLABORATING COMPANIES AND INSTITUTIONS

Glow Magazine
Gramona
Gran Teatre del Liceu
Gran Via 2
Grup Godó
Gucci
Han Nefkens
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La Vanguardia
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**As an individual:** you can make a contribution, become a member and participate in the charity activities organized by the Foundation.

**As a company:** you can collaborate permanently with the Foundation by sponsoring a research project or a specific event.

You will find these and other options at [www.flsida.org](http://www.flsida.org).

WANT MORE INFORMATION? Write to [comunicacio@flsida.org](mailto:comunicacio@flsida.org)
Natural history of human papillomavirus infections involving anal, penile, and oral sites among HIV-positive men.

A dendritic cell-based vaccine elicits T cell responses associated with control of HIV-1 replication.

HIV-1 subtype is an independent predictor of reverse transcriptase mutation K65R in HIV-1 patients treated with combination antiretroviral therapy including tenofovir.

Expansion of antibody secreting cells and modulation of neutralizing antibody activity in HIV infected individuals undergoing structured treatment interruptions.

Update of the drug resistance mutations in HIV-1: March 2013.
Authors: Johnson VA, Calvez V, Gunthard HF, Paredes R, Pillay D, Shafer RW, Wensing AM, Richman DD.

Computational studies identifying entry inhibitor scaffolds targeting the Phe43 cavity of HIV-1 gp120.
Authors: Tintori C, Selvaraj M, Badia R, Clotet B, Esté JA, Botta M.

Safety and efficacy of dolutegravir in treatment-experienced subjects with raltegravir-resistant HIV type 1 infection: 24-week results of the VIKING Study.

Predictors of CD4+ T-Cell Counts of HIV Type 1-Infected Persons After Virologic Failure of All 3 Original Antiretroviral Drug Classes.
Authors: Anne Audelin, Antonella Castagna, Dominique Costagliola, Alessandro Cozzi-Lepri, Andrea De Luca, Stephane De Wit, Frank de Wolf, Maria Dorrucchi, Xavier Duval, Gerd Fätkenheuer, Federico García, Jade Ghosn, Huldrych Günthard, Klaus Jansen, Ali Judd, Bruno Ledegerber, Sergio Lo Caputo, Rebecca Lodwick, Bernard Masquelier, Laurence Meyer, Amanda Mocroft, Cristina Mussini, Antoni Noguera-Julian, Niels Obel, Dimitrios Paraskevis, Roger Paredes, Santiago Pérez-Hoyos, Andrew Phillips, Deenan Pillay, Daniel Podzamczer, José T Ramos, Christoph Stephan, Pat A Tookey, Carlo Torti, Giota Tou lonumi, Ard van Sighem, Josiane Warsawski, Robert Zangerle, Josiane Warszawski, François Dabis, Murielle Mary Krause, Catherine Leport, Peter Reiss, Maria Prins, Heiner Bucher, Caroline Sabin, Diana Gibb, Julia Del Amo, Claire Thorne, Ole Kirk, Andrea Antinori, Antonella d’Arminio Monforte, Norbert Brockmeyer, José Ramos, Manuel Battegay, Andrí Rauch, Pat Tookey, Jordi Casabona, Jose M Miró, Santiago Pérez-Hoyos, Andrew Phillips, Deenan Pillay, Daniel Podzamczer, José T Ramos, Christoph Stephan, Pat A Tookey, Carlo Torti, Giota Tou lonumi, Ard van Sighem, Josiane Warsawski, Robert Zangerle, Josiane Warszawski, François Dabis, Murielle Mary Krause, Catherine Leport, Peter Reiss, Maria Prins, Heiner Bucher, Caroline Sabin, Diana Gibb, Julia Del Amo, Claire Thorne, Ole Kirk, Andrea Antinori, Antonella d’Arminio Monforte, Norbert Brockmeyer, José Ramos, Manuel Battegay, Andrí Rauch, Pat Tookey, Jordi Casabona, Jose M Miró, Stephane de Wit, Tessa Goetghemuer, Ramon Teira, Myriam Garrido, David Haerry, Ian Weller, Antonella d’Arminio-Monforte, Jesper Grarup, Genevieve Chene, Julia Bohlius, Vincent Bouteloup, Matthias Egger,

**Learning from drug changes in antiretroviral therapy. Editorial Comment.**
Authors: Blanco J, Clotet B

**Impact of Minority Nonnucleoside Reverse Transcriptase Inhibitor Resistance Mutations on Resistance Genotype after Virologic Failure.**
Authors: Li JZ, Paredes R, Ribaudo HJ, Kozal MJ, Svarovskaia ES, Johnson JA, Geretti AM, Metzner KJ, Jakobsen MR, Hullsiek KH, Ostergaard L, Miller MD, Kuritzkes DR.

**Screening NK-, B- and T-cell phenotype and function in patients suffering from Chronic Fatigue Syndrome.**

**Mortality in well controlled HIV in the continuous antiretroviral therapy arms of the SMART and ESPRIT trials compared with the general population.**

**CD4 cell count and viral load-specific rates of AIDS, non-AIDS and deaths according to current antiretroviral use.**
Authors: Mocroft A, Phillips AN, Gatell J, Horban A, Ledergerber B, Zilmer K, Jevtovic D, Maltez F, Podlekareva D, Lundgren JD; EuroSIDA study in EuroCOORD.

**Long-term effectiveness of infrared coagulation for the treatment of anal intraepithelial neoplasia grades 2 and 3 in HIV-infected men and women.**

**Assessment, diagnosis, and treatment of HIV-associated neurocognitive disorder: a consensus report of the mind exchange program.**
Authors: Mind Exchange Working Group (Muñoz-Moreno JA).

**The infectious synapse formed between mature dendritic cells and CD4+ T cells is independent of the presence of the HIV-1 envelope glycoprotein.**

**Clinical evaluation of Rega 8: an updated genotypic interpretation system that significantly predicts HIV-therapy response.**
Journal: PLoS One  

**HLA class I protective alleles in an HIV-1-infected subject homozygous for CCR5-Δ32/Δ32.**  
Journal: Immunobiology  

**From TMC114 to Darunavir: Five Years of Data on Efficacy.**  
Authors: Josep M. Llibre, Arkaitz Imaz and Bonaventura Clotet.  
Journal: AIDS Reviews  

**Limited cross-border infections in patients newly diagnosed with HIV in Europe.**  
Journal: Retrovirology.  

**Restriction of HIV-1 Replication in Primary Macrophages by IL-12 and IL-18 through the Upregulation of SAMHD1.**  
Journal: The Journal of Immunology  
2013 May 1;190(9):4736-41. doi: 10.4049/jimmunol.1203226. Epub 2013 Mar 22.

**A genome-wide association study of resistance to HIV infection in highly exposed uninfected individuals with hemophilia A.**  
Journal: Human Molecular Genetics: Oxford Journals  

**Association between antiretroviral exposure and renal impairment among HIV-positive persons with normal baseline renal function: the D:A:D study.**  
Journal: Journal of Infectious Diseases.  

**Antiretroviral treatment switch strategies for lowering the costs of antiretroviral therapy in subjects with suppressed HIV-1 viremia in Spain.**  
Authors: Josep M Llibre, Gloria Cardona, José R Santos, Angels Andreu, Josep O Estrada, Jordi Ara, Xavier Bonafont, Bonaventura Clotet.  
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**Impact of Antiretroviral Drugs in Pregnant Women and Their Children in Africa: HIV Resistance and Treatment Outcomes.**
HIV exposed seronegative individuals show antibodies specifically recognizing native HIV envelope glycoprotein.
Authors: Carrillo J, Restrepo C, Rallón NI, Massanella M, del Romero J, Rodríguez C, Soriano V, Clotet B, Benito JM, Blanco J.

Dynamics of CD8 T-Cell Activation after Discontinuation of HIV Treatment Intensification.
Authors: Marta Massanella, Anna Esteve, Maria J Buzón, Josep M Llibre, Maria Carmen Puertas, Josep M Gatell, Pere Domingo, Mario Stevenson, Bonaventura Clotet, Javier Martínez-Picado, Julià Blanco

Implications of HIV drug resistance on first- and second-line therapies in resource-limited settings: report from a workshop organized by the Collaborative HIV and Anti-HIV Drug Resistance Network.
Authors: Pillay D, Albert J, Bertagnolio S, Boucher C, Brun-Vezinet F, Clotet B, Giaquinto C, Perno CF.

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Contribution of genetic background, traditional risk factors, and HIV-related factors to coronary artery disease events in HIV-positive persons.

Impact of switching from zidovudine/lamivudine to tenofovir/emtricitabine on lipoatrophy: the RECOMB study.

Changes in codon-pair bias of human immunodeficiency virus type 1 have profound effects on virus replication in cell culture.
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Simultaneous Pharmacogenetics-Based Population Pharmacokinetic Analysis of Darunavir and Ritonavir in HIV-Infected Patients.

Virological Efficacy in Cerebrospinal Fluid and Neurocognitive Status in Patients with Long-Term Monotherapy Based on Lopinavir/Ritonavir: An Exploratory Study.
Authors: José R. Santos, José A. Muñoz-Moreno, José Moltó, Anna Prats, Adrià Curran, Pere Domingo, Josep M. Llibre, Daniel R. McClernon, Isabel Bravo, Jaume Canet, Victoria Watson, David Back, Bonaventura Clotet
Journal: PlosOne July 26, 2013 DOI: 10.1371/journal.pone.0070201

HIV-1 tropism testing in subjects achieving undetectable HIV-1 RNA: diagnostic accuracy, viral evolution and compartmentalization.
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Pneumocystis jirovecii Pneumonia in HIV-1-Infected Patients in the Late-HAART Era in Developed Countries.
Authors: Josep M Llibre, Boris Revollo, Samuel Vanegas, Juan J Lopez-Nuñez, Arely Ornelas, Joan M Marin, Jose R Santos, Paola Marte, Marta Morera, Paola Zuluaga, Jordi Tor, Bonaventura Clotet.

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Authors: Pou C, Bellido R, Casadellà M, Puig T, Clotet B, Harrigan R, Paredes R.

A Brief and Feasible Paper-Based Method to Screen for Neurocognitive Impairment in HIV-Infected Patients: The NEU Screen.
Authors: Jose A. Muñoz-Moreno, PhD, Anna Prats, MS, Núria Pérez-Álvarez, MS, Carmina R. Fumaz, PhD, Maite Garolera, PhD, Eduardo Doval, PhD, Eugènia Negredo, PhD, Maria J. Ferrer, MS, and Bonaventura Clotet, PhD, for the NEU Study Group.

Significant changes in integrase-associated HIV-1 replication capacity between early and late isolates.
Authors: Capel E, Parera M, Clotet B, Martínez MA.

Resistance to the most recent protease and non-nucleoside reverse transcriptase inhibitors across HIV-1 non-B subtypes.

Distribution of human papillomavirus genotypes in anal cytological and histological specimens from HIV-infected men who have sex with men and men who have sex with women.

Effectiveness of Mindfulness-Based Cognitive Therapy on the Quality of Life, Emotional Status, and CD4 Cell Count of Patients Aging with HIV Infection.
Authors: Marian Gonzalez-Garcia, Maria Jose Ferrer, Xavier Borras, Jose A. Muñoz-Moreno, Cristina Miranda, Jordi Puig, Nuria Perez-Alvarez, Joaquim Soler, Albert Feliu-Soler, Bonaventura Clotet, Carmina R. Fumaz.
The incidence of AIDS-defining illnesses at a current CD4 count ≥ 200 cells/μL in the post-combination antiretroviral therapy era.

Early but limited effects of Raltegravir intensification on CD4 T cell reconstitution in HIV-infected patients with a immunodiscordant response to antiretroviral therapy.
Authors: Negredo, Eugenia; Puertas, Maria Carmen; Massanella, Marta; Buzón, Maria José; Puig, Jordi; Pérez Alvarez, Nuria; Pérez-Santiago, Josuè; Bonjoch, Anna; Moltó, José; Jou, Antoni; Echeverría, Patricia; Llibre, Josep M; Martinez-Picado, Javier; Clotet, Bonaventura; Blanco, Julià. Journal: JAC (Journal of Antimicrobial Chemotherapy) 2013 Oct;68(10):2358-62. doi: 10.1093/jac/dkt183. Epub 2013 May 14.

Legal, Ethical and Economic Implications of Breaking Once-Daily Fixed-Dose Antiretroviral Combinations into their Single Components for Cost Reduction.

Executive summary of the Consensus Document of GeSIDA and Spanish Secretariat for the National Plan on AIDS on combined antiretroviral treatment in adults infected by the human immunodeficiency virus (January 2013)

Análisis de costes y de coste/eficacia de las pautas preferentes de GESIDA/PlanNacional sobre el Sida en 2013 para el tratamiento antirretroviral inicial en adultos infectados por el virus de la inmunodeficiencia humana.

Immunodiscordant responses to HAART—mechanisms and consequences.

Superinfection with drug-resistant HIV is rare and does not contribute substantially to therapy failure in a large European cohort.

No detection of the NSSB S282T mutation in treatment-naïve genotype 1 HCV/HIV-1 coinfected patients using deep sequencing.
Authors: Franco S, Casadellà M, Noguer-Julian M, Clotet B, Tural C, Paredes R, Martinez MA.
Journal: Journal of Clinical Virology

Stable HIV-1 Integrase Diversity During Initial HIV-1 RNA Decay Suggests Complete Blockade of Plasma HIV-1 Replication by Effective Raltegravir-Containing Salvage Therapy.
Authors: Marc Noguer-Julian, Maria Casadellà, Christian Pou, Cristina Rodríguez, Susana Pérez-Álvarez, Jordi Puig, Bonaventura Clotet, Roger Paredes.

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Authors: Martínez E, Jódar Gimeno E, Reyes García R, Carpiñero P, Casado JL, Del Pino Montes J, Domingo Pedrol P, Estrada V, Maalouf J, Negredo E, Ocampo A, Muñoz-Torres M.
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[Is it possible to reduce the human immunodeficiency virus/AIDS-associated chronic inflammation?]
Authors: Rocafort M, Paredes R.
Journal: Medicina Clínica (Barcelona).
Cost-effectiveness study of treatments for fracture prevention in postmenopausal women.
Authors: Pérez-Álvarez N, Kaskens L, Darbà J.

Differences in Study Populations of North-American and West European in the Detection of Neurocognitive impairment in HIV Infection: Comparison of 3 Methods of Screening.

Prolonged Preservation of HIV-specific Cellular Immunity in Recently HIV+ Individuals Receiving Maraviroc Intensified HAART.
Authors: AI KawanaTachikawa, J Llibre, I Bravo, R Escrig, B Mothe, J Miró, J Gatell, A Iwamoto, B Clotet, and C Brander.

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Authors: Gloria Martrus, M Nevot, B Clotet, and MA Martinez.

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Authors: Christian Pou, R Bellido, M Casadella, T Puig, B Clotet, R Harrigan, and R Paredes.

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The PISCIS Cohort.
Authors: A Esteve, Jose Miro, C Campbell, A Gallos, D Podzamczer, C Tural, J Murillas, F Segura, C Cifuentes, J Casabona, and PISCIS Study Group.

Differential Subcutaneous Adipose Tissue Gene Expression Pattern with 1st-line Treatment Containing either Efavirenz or Lopinavir/ritonavir.
Authors: Lander Egana-Gorrorno, E Martinez, M Lonca, T Escriba, P Domingo, J Fontdevila, F Vidal, E Negredo, J Gatell, and M Arnedo.

Multicentre randomized study to assess changes in bone mineral density after switching from tenofovir to abacavir in HIV-1-infected subjects with low bone mineral density (OsteoTDF Study).

Association of cytomegalovirus (CMV) IgG with markers of incomplete CD4 T cell recovery in long-term virologically suppressed HIV+ individuals.
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Unbalanced T cell maturation and immunosenesence in immunomodordinate HAART-suppressed HIV-infected individuals affects the CD4 T cell compartment.
Authors: Marta Massanella, Jorge Carrillo, Marta Curriu, Dan Ouchi, Jordi Puig, Cecilia Cabrera, Bonaventura Clotet, Eugènia Negredo and Julià Blanco.

Quasispecies Diversity in Acute Hepatitis C Infection in HIV-Coinfected Patients.
Communications at Conferences

Restriction of HIV-1 replication in primary macrophages by interleukin-12 and interleukin-18 through the upregulation of SAMHD1.
Authors: Pauls, E., Esther Jimenez, Alba Ruiz, Marc Permanyer, Ruth Peña, Bonaventura Clotet, Margarida Bofill, Jose A. Este.

Hepatitis C Virus NS3/4A Quasispecies Diversity in Acute Hepatitis C Infection in HIV-Coinfected Patients.
Authors: Nevot, M, Boesecke, C, Parera, M, Andrés, C, Revollo ,B, Tural, C, Clotet, B, Rockstroh, J and Martinez, MA.

Actin dynamics differentially regulate cell to cell transfer of HIV in memory and naive CD4+ T cells.
Authors: Permanyer, M., Pauls, E., Clotet, B., Esté, JA.

The infectious Synapses Formed between Mature Dendritic Cells and CD4+ T Cells Are Independent of the Presence of the HIV-1 Envelope Glycoprotein.
Authors: Rodriguez-Plata, M., I Puigdomenech, N Izquierdo-Useros, M Puertas, J Carrillo, I Erkizia, B Clotet, J Blanco, and J Martinez-Picado.

Identification of MED14 as a key Mediator Complex factor in HIV transcription.
Authors: Ruiz-de Andres, A., Pauls, E., Clotet, B., Esté, JA.

Keystone Symposia on Molecular and Cellular Biology
Venue: Breckenridge, Colorado (EUA)
Date: 03/04/2013 – 08/04/2013


14th International Workshop on Clinical Pharmacology of HIV Therapy
Venue: Amsterdam
Date: 22/04/2013 - 24/04/2013

Pharmacokinetics of darunavir/ritonavir 600/100 mg QD within a dose-optimization program.
Authors: J Moltó, M valle, A Curran, E Ferrer, P Domingo, E Ribera, S Di Yacovo, C Miranda, S Cedeño, B Clotet.

Cost effectiveness evaluation for promoting HIV treatment adherence: cohort simulation using a pilot study data.
Authors: Pérez-Álvarez N, Muñoz-Moreno JA, Gomez G.

Comparison of two approaches used in the characterization of an outcome with underdetection limit.
Authors: Pérez-Álvarez N, Fumaz CR, Clotet B.

6th International Symposium on Neuropsychiatry
Venue: Barcelona
Date: 09/05/2013 - 10/05/2013

Authors: Muñoz-Moreno JA, Fuster MJ, Fumaz CR, Ferrer MJ, Molero F, Jaén À, Clotet B, Dalmau D.

XVII Congress of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC)
Venue: Zaragoza
Date: 29/05/2013 - 31/05/2013

Clinical Management of Neurocognitive Disorders Associated with HIV Infection: GeSIDA Clinic Recommenda-
**COMMUNICATIONS AT CONFERENCES**

**Tions - 2013 Detection, Evaluation and Diagnosis.**
Authors: Muñoz-Moreno JA.

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Venue: Burgos
**Date: 09/06/2013 – 12/06/2013**

Changes in codon-pair bias of human immunodeficiency virus type 1 have profound effects on virus replication in cell culture.
Authors: Martrus, G., Nevot, M., Clotet, B., Martinez, M.A.

**Hepatitis C Virus NS3/4A Quasispecies Diversity in Acute Hepatitis C Infection in HIV-Coinfected Patients.**
Authors: Nevot, M, Boesecke, C, Parera, M, Andrés, C, Revollo ,B, Tural, C, Clotet, B, Rockstroh, J and Martinez, MA.

**IAS 2013: 7th IAS (International AIDS Society) Conference on HIV Pathogenesis, Treatment and Prevention**
Venue: Kuala Lumpur, Malaysia
**Date: 30/06/2013 – 03/07/2013**

Randomized Study to Evaluate Lopinavir/ritonavir vs. Darunavir/ritonavir Monotherapies as Simplification of Triple Therapy Regimens.
Authors: José R Santos, José Moltó, Josep M Llibre, Dácil García Rosado, Isabel Bravo, José A Muñoz-Moreno, Núria Pérez-Álvarez, Roger Paredes and Bonaventura Clotet.

**XVI National Conference on AIDS - XI International Conference AIDS Impact**
Venue: Barcelona
**Date: 29/09/2013 – 02/10/2013**

Mindfulness and People living with HIV/AIDS: A harmonious coupling (New challenges for clinical psychology).
Authors: Fumaz CR.

Psychoeducative intervention to improve the quality of life of people living with HIV/AIDS (Study on Quality of Life in People living with HIV/AIDS).
Authors: Carmina R. Fumaz

**5th International Meeting on HIV Infection of the Central Nervous System: NEUROHIV 2013**
Venue: Palerm, Italy
**Date: 03/10/2013 – 05/10/2013**

**Screening and Testing: The MIND Exchange Program.**
Authors: Muñoz-Moreno JA.

**Conference on AIDS Vaccine 2013**
Venue: Barcelona
**Date: 07/10/2013 – 10/10/2013**

Mechanisms of abrupt HIV disease progression in a cohort of previous elite and viremic HIV controllers.
Authors: Muntsa Rocafort, Rocio Bellido, Manel Crespo, Jordi Puig, M. Teresa Orodea, Andres Marco, Lidia Ruiz, Jose Alcamí, Bonaventura Clotet, Roger Paredes, Christian Brander, Beatriz Mothe for the Late Progressors Study.

**Dynamics of Viral Load (VL) Rebound After cART Interruption in Chronic HIV Infected Patients Receiving MVA-B plus Disulfiram.**
Authors: Beatriz Mothe, Sonsoles Sánchez, Saray Corral, Nuria Climent, Alberto C. Guardo, Lorna Leal, Berta Torres, José Luis Jiménez, Judit Pich, Joan Albert Arnaiz, Agathe León, María Angeles Muñoz-Fernández, Jose M Gatell, Bonaventura Clotet, Mariano Esteban, Montserrat Plana, Juan Carlos López Bernaldo de Quirós, Christian Brander, Felipe García for the RISVAC-03 Study.

**Altered Immunodominance Hierarchy and Increased T-cell Breadth upon HIV-1 Conserved Element DNA Vaccination in Macaques.**
Authors: Barbara K. Felber, Viraj Kulkarni, Antonio Valentín, Margherita Rosati, Candido Alicea, Niranjan Y. Sardesai, Sylvie Le Gall, Beatriz Mothe, Christian Brander, Morgane Rolland, James I. Mullins, George N. Pavlakis.

**Safety, Immunogenicity and Dynamics of Viral Load Rebound After cART Interruption in Chronic HIV Infected Patients Receiving MVA-B Vaccination.**
Authors: Beatriz Mothe, Núria Climent, Montserrat Plana,
HIVACAT’s Community Advisory Board: an experience on community engagement in a HIV Vaccine Research Project in Catalonia.
Authors: Laia Ruiz Mingote, Pep Coll, Patricia García de Olalla, Joan Joseph, José Luis Martínez Alonso, Mercè Meroño, Silvia Moreira, Francesc Soler, Jorge Palacio Vieira, Christian Brander, Rosina Malagrida, Ferran Pujol, Michael Meulbroek, Joaquim Roqueta, Joan Caylà, Gabriel Boichat Sancho.

Improved Definition of Memory B Cells by the CD45RB Marker Allows the Identification of New Altered B Cell Subsets in HIV-1 Infected Patients.
Authors: Carrillo, J.; Negredo, E.; Puig, J.; et al.

Spontaneous-Death Fails to Explain the Lack of Recovery of B Cell Subsets in HAART-Treated HIV-1 Infected Patients.
Authors: Carrillo, J.; Negredo, E.; Puig, J.; et al.

Highly Pathogenic Adapted HIV-1 Strains Limit Immune Responses and Dictates Rapid Disease Progression in Early Infection.

Changes in codon-pair bias of human immunodeficiency virus type 1 have profound effects on virus replication in cell culture.
Authors: Martrus, G., Nevot, M., Andres, C, Clotet, B., Martinez, M.A.

Rapid Screening of Human Sera for the Presence of Neutralizing Anti-IMPER Antibodies.
Authors: Molinos, L. M.; Carrillo, J.; Marfil, S.; et al.

Prevalence of virological failure and resistance mutations to first generation integrase inhibitors in Spain.

HIV-1 Gag evolution during dual selective pressure by drugs and HLA-class I immune responses in long-term treated patients.
Authors: E Jimenez, R Peña, FM Codoñer, S Santamaria, M Pino, T Vollbrecht, B Clotet, J Martinez-Picado, JG Prado.

Siglec-1 expressed on activated monocytes captures and transfers HIV-1 through recognition of sialyllactose exposed on viral membrane gangliosides.

III International Conference on Dual Pathology. Addiction and Other Mental Disorders.
Venue: Barcelona
Date: 23/10/2013 - 26/10/2013

Authors: Muñoz-Moreno, JA.

V National Conference by GeSIDA 2013
Venue: Sitges, Barcelona (Spain)
Date: 19/11/2013 - 22/11/2013

Siglec-1 expressed on activated monocytes captures and transfers HIV-1 through recognition of sialyllactose exposed on viral membrane gangliosides.

6th International Workshop on HIV Persistence during Therapy.
Venue: Miami, Florida (EUA)
Date: 03/12/2013 – 06/12/2013

Authors: Puertas, M.C., Salgado, M., Morón-López, S., Muñoz-Moreno, J., Moltó, J., Clotet, B., and J Martinez-Picado.
The Foundation develops its research participating in studies conducted by external promoters but also conducting its own clinical trials to answer unresolved questions.

In 2013, the Foundation has conducted the following studies:

**CLINICAL TRIALS**

**OSTEODOLU: 2013-000547-85, NCT01966822**
Multicentre study to assess changes in bone mineral density of the switch from protease inhibitors to dolutegravir in HIV-1-infected subjects with low bone mineral density.

**DRV600: 2011-006272-39**
Clinical trial to evaluate the efficacy, safety and economic impact of reducing the dose of darunavir in HIV-infected patients treated with darunavir/ritonavir once daily.

**NUKE-OUT: 2012-000198-21**
A multicenter randomised opened study to assess the efficacy and safety of the withdrawal of nucleos/tide analogues with complete or intermediate resistance in multitreated HIV-1-infected subjects with virological suppression.

**MARAVIPREX: 2012-003119-73, NCT01719627**
First study to evaluate the capacity of Maraviroc drug to protect against HIV infection in samples of rectal mucosa from healthy volunteers.

**TRIANT-TE: 2010-024510-57, NCT01348282**
Randomized, prospective, controlled study, to compare the efficacy and safety of two different pharmacological strategies on neurocognitive disorder in HIV infection.

**TULIP: 2011-002853-77, NCT01458977**
Clinical trial to evaluate the effect of co-formulation of tenofovir / emtricitabine on lipid lowering in patients infected with HIV-1 (cholesterol and triglycerides). The study was performed with subjects with dyslipidemia and sustained virologic suppression, and receiving monotherapy with boosted protease inhibitors with ritonavir.

**PROTEST: 2011-000799-32, NCT01378910**
Utility of genotypic tropism of HIV-1 from the proviral DNA to guide treatment with CCR5 antagonists in subjects with undetectable HIV-1 viral load.

**OSTEOTENOFOVIR: 2010-019879-29, NCT01153217**
Multicenter study to assess changes in bone mineral density probably caused by a change of treatment from tenofovir to abacavir in patients infected by HIV-1 with bone mineral density loss.
OBSERVATIONAL STUDIES

HIV-SEX-MALE
Cross-sectional study to describe the sexual activity of HIV-1 infected men.

ARFI
Pilot study to evaluate the concordance between two non-invasive techniques (transient elastometry and acoustic radiation force impulse) and the Shasta index for the prediction of liver fibrosis in patients coinfected with HIV/HCV.

RESIL-HIV
Transversal study to evaluate the effect of resilience in coping with chronicity and aging in HIV-1 infected patients.

COHO-MONO/FLS-IPs-2012-02
Monotherapy with protease inhibitors in clinical practice: a cohort study.

PIC-OSSI
Multicenter observational study to evaluate the peak bone in HIV-1 patients.

IP and ENDOTHELIUM/FLS-IPS-2012-01
Endothelial dysfunction in patients with HIV infection in treatment with protease inhibitors.

TENOFOVIRIARAJANO-PROS/FLS-TEN-2012-01
Prospective/retrospective observational study to evaluate the evolution of the kidney after stopping tenofovir in patients with renal impairment.

INI-VAIN/FLS-INI-2012-01
Incidence, prevalence and clinical consequences of virological failure to first-generation integrase inhibitors in Spain.

HPV WOMEN COHORT: FLS-VPH-2007-02
Prospective cohort study (HIV-positive and negative women) about the coexistence of human papillomavirus (HPV) infection in cervix, anus and oral cavity and cytological and histological lesions precursors of cancer.

HPV MEN COHORT: FLS-VPH-2007-01
Prospective study on the prevalence of infection with human papillomavirus (HPV) in oral cavity, anus and penis and the incidence of anal cancer in HIV-positive men.

CHECK-EAR
Study on the prevalence and incidence of sexually transmitted infections and diseases related to human papillomavirus in HIV-negative men who have sex with men (MSM).

CONTROLLERS
A cohort study: HIV-positive patients elite controllers and non-progressors are tracked prospectively.

LATE PROGRESSORS
Determination of the immunologic, genetic and viral factors contributing to loss of control of the HIV infection in the population of slow progressors (long term non-progressors).

NEFROPROTEOMIC-VIH