



✦ A laboratory at the Gulbenkian Institute of Science.



Amounts in euros	
Personnel costs	1 520 055
Operating costs	1 986 170
Subsidies and grants	2 085 032
Departmental activities	5 805 531
<i>Investment</i>	<i>1 720 656</i>
Total	11 396 788
Receipts	6 193 256

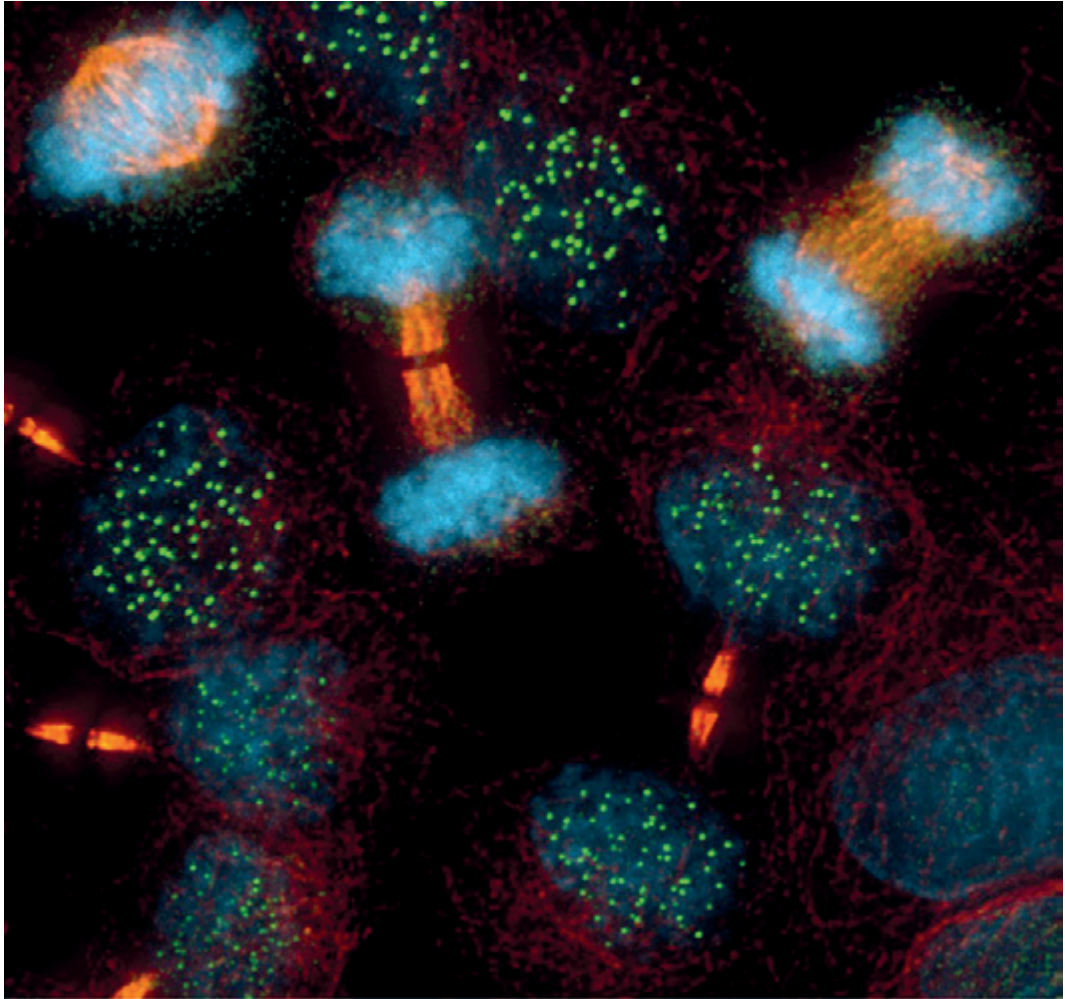
** The amounts indicated refer to funds managed by the Calouste Gulbenkian Foundation, excluding other financing assigned directly to researchers, students or technicians or managed by other bodies.*

In 2009, the Gulbenkian Institute of Science (IGC) continued to pursue its mission as a leading international centre in the field of scientific research and postgraduate training.

The IGC operates as a host institution with the following goals: to identify, educate, import, foster and export new scientific leaderships with a view to strengthening the Portuguese scientific community and implementing and developing scientific research programmes of proven excellence. These goals were guaranteed in 2009 through the introduction of seven new research groups. Like the other groups already housed at the IGC, these new groups benefit from an exceptional intellectual environment, excellent premises, *state-of-the-art* equipment and competitive services under conditions of complete intellectual and financial autonomy. Three research groups left the IGC in 2009 for other research institutions, two of which had been established in Portugal.

Research

In 2009, research at IGC was carried out by 38 research groups and eight small teams of research fellows – young independent researchers who established and developed independent lines of research, in keeping



Human cells in different phases of the cycle of cell division. The chromosomes are shown in blue, and the protein fibres on which the chromosomes move towards the poles of the cell are shown in red.

with an institutional coherence guaranteed by the director and supported by the Scientific Advisory Board. In 2009, 18 external groups based at other Portuguese research institutions continued to be associated with the Institute.

The Institute's scientific interests are centred on research into the genetic and molecular bases for the development and evolution of complex living systems, based on approaches centred upon the organism, using multiple animal models (ranging from bacteria and yeasts to the fruit fly, zebra fish and mice) and also conducting research into humans.

Under the scope of its activities, the following thematic areas were consolidated: evolutionary biology, the genetic makeup of complex diseases and of resistance to infection, cellular biology, cell cycle

control and DNA repair, inflammation, immunity and auto-immune diseases, the biological development of animals and plants, behavioural neurobiology, and theoretical and computational biology.

In 2009, 119 articles were published in international scientific journals, while over 300 papers were given by IGC researchers at international congresses or scientific meetings. IGC was the host institution for the partial or total completion of nine doctoral theses, 12 master's degree theses and one degree thesis.

The year was particularly memorable in terms of scientific awards and funding obtained by IGC researchers. Besides the many projects approved for funding by the Foundation for Science and Technology, as well as the European Union Framework Programme, three research groups were awarded research grants from the European Research Council (ERC), the most important European organisation for the funding of scientific research. By awarding amounts of around two million euros for a period of five years, ERC recognises the innovative excellence of the projects proposed. The European Molecular Biology Organisation (EMBO) awarded two of the Institute's researchers an installation grant and a "Young Investigator Award". Other national awards included the Pfizer Award for Basic Research, the NEDAI Research Prize in Auto-Immunity, the Crioestaminal Award, the APCL Award of Support for Research into Oncology-Haematology, a Terry Fox-NRS/LPCC Grant for Clinical Cancer Research, as well as the Oeiras Municipal Council Gold Medal of Municipal Merit (awarded to the director), the Seeds of Science Award in the category of "Communication", and a "Best Practices" award from the Agency for Administrative Modernisation. In short, IGC researchers were awarded a large number of doctoral and post-doctoral scholarships, under a variety of national and European competitive application processes.

Work also continued in 2009 on the improvement and equipment of some of the Institute's services and technological platforms, with the aim of enlarging and/or improving facilities, in preparation for the reception of new groups in 2010.

Post-graduate education

With the systematic support of the Calouste Gulbenkian Foundation and the Foundation for Science and Technology (FCT), postgraduate teaching has always been a major component of IGC activities. In 2009, three doctoral programmes were in operation at the Institute.

The third editions were organised of the Gulbenkian/Champalimaud International Neuroscience Doctoral Programme (INDP) and the PhD Programme in Integrative Biomedical Science (PIBS), this being an internal doctoral programme run by IGC, dedicated to recruiting students for the Institute's laboratories.

The 21 students enrolled at the Institute in 2009 consisted of both Portuguese and foreign researchers, recruited through international competitive applications. They joined those who had already passed through IGC, raising the total to 483 and forming a quite enviable network of *alumni*, spread throughout the world's best research centres.

2009 also witnessed the second consecutive year of the Doctoral Programme for Physicians, resulting from an initiative introduced by the Gulbenkian Foundation, in partnership with the

Champalimaud Foundation, the Portuguese Ministry of Health and the FCT. This programme is designed for doctors, specialist interns or practising specialists, who are highly motivated to take part in clinical research or clinical translation activities and wish to become involved in the future in multidisciplinary cooperative projects as a complement to their activity as attending physicians. Some of the programme's training modules were given at IGC and/or were taught by IGC researchers.

The Gulbenkian PhD Programme in Computational Biology – backed by the founding support of Siemens SA Portugal – did not admit new students as the programme had reached the end of its planned five-year lifespan, but it continued to maintain links with the students placed in research laboratories around the world, providing them with supervision and guidance. Within this context, the FLAD (Luso-American Development Foundation) Co-Laboratory in Computational Biology continues to play an important coordinating role by integrating students into the national scientific network.

An integral part of the efforts to provide continuing training for the Institute's researchers is the international seminar programme, which benefits from the participation of recognised world leaders in biomedicine. In 2009, just as in previous years, more than 150 guest scientists passed through IGC, many of whom were involved in the teaching of the doctoral programme courses. IGC is also a regular meeting point for scientists, who come here to take part in meetings, workshops and scientific conferences; in 2009, 10 international meetings took place at IGC, organised by its researchers.



Pedro Silva



✚ Some of the four thousand visitors on “Researchers’ Night – Setting the Stage”, in the gardens of the Calouste Gulbenkian Foundation, in Lisbon, in September 2009. On the same day in Porto, Coimbra and Olhão, eight thousand visitors took part in the different activities of a project coordinated by IGC.

Involvement of society in science

IGC continues to run a programme dedicated to the communication of science. The aims of this programme are to promote IGC's image and the research carried out at the Institute, as well as to encourage the involvement of society in scientific research and its funding. Through activities based on direct, two-way communication and dialogue, the programme for the communication of science is aimed at the media, teachers and students, and the general public.

In 2009, IGC coordinated the “Researchers’ Night”, an initiative promoted by the European Commission. Under the title of “Setting the Stage”, this project involved nine partners from Porto, Coimbra, Lisbon and Olhão, with the aim of bringing researchers and the general public closer together, through the medium of the performing arts. Roughly 12 thousand people visited the different events and participated in the activities of this “Researchers’ Night”. The various shows and performances from that night have since been repeated at several different venues.

The fourth IGC “Open Day” was also held, with the Institute being visited by roughly 700 people, who had the chance to get to know the research environment better, coming into contact with scientists and other members of IGC.

The programme of school visits was continued, with 29 visits and 971 secondary school students from the 9th to the 12th years visiting the Institute. A programme was launched to stimulate the development of science in schools, with guidance and support being provided to students engaged in scientific projects.

The “Resistance!” project was developed in connection with the “Darwin’s Evolution” exhibition at the Calouste Gulbenkian Foundation. Experimental kits were sent to 68 teachers around the whole country, who carried out scientific experiments related with evolutionary biology. The reports of these experiments were evaluated, with the best placed students being selected to take up internships at IGC laboratories in 2010.

Under the terms of the protocol signed with Bragança Municipal Council, the first series of laboratory placements for final-year secondary school students took place. This protocol has been extended to various other councils in the district of Bragança for the organisation of similar placements in 2010.

The partnership was maintained with Everything is New, the promoters of the art and music event OptimusAlive!-Oeiras. This resulted in the award of two more research scholarships to two recent graduates selected on the basis of a national competition, enabling them to undertake research projects in the areas of malaria and population genetics.

The IGC was a partner of the Portuguese Association against Leukaemia (APCL) in the initiative “Solidários até à Medula” – a fund-raising project for scientific research. With the support of the RTP1 television channel, a 12-hour television marathon took place, which included musical performances, interviews with scientists and doctors, testimonies provided by patients and their families, the APCL concert, an auction of art works and a call centre set up to receive public donations.