

**SCHOOL OF HEALTH SCIENCES**

**LIFE AND HEALTH SCIENCES RESEARCH INSTITUTE  
(ICVS)**

**ANNUAL REPORT  
2005**

**University of Minho, Braga | January 2006**

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## **1. INTRODUCTION**

The Life and Health Sciences Research Institute (ICVS) is a fully incorporated research structure within the School of Health Sciences (ECS) of the University of Minho (UM). It was formally integrated in the national system of science and technology by FCT on January 2003 and ranked as Excellent by the FCT's international panel of experts' evaluation (see Report 2004 at ECS/ICVS web page).

The creation of the ICVS was guided, from the very beginning, by the following objectives:

- to promote original lines of investigation with recognized impact in biomedical fields;
- to develop post-graduation activities by promoting international post-graduated programmes;
- to provide specialised health services to the community.

At the same time, the ICVS, as a research structure within the ECS, should also assure that its staff develop a full academic career, including a strong involvement in research. The appropriate links between teaching and research were established in order to provide a "Research-Based Teaching and Learning Environment" for undergraduate students.

In connection with the ICVS, the ECS has proceeded with a strong commitment to progressively consolidate the human and infrastructural resources, as well as the aspects and procedures associated to the organisation and articulation of teaching and research.

The research activities of ICVS are presently focused on three main research domains:

- INFECTIOUS DISEASES
- NEUROSCIENCES
- DEVELOPMENT AND NEOPLASIA

Presently, 89 researchers are actively involved in research activities at the ICVS supported by 12 members of the non-academic staff shared with the School. There are 25 ongoing projects, of which fourteen (ten led by the ICVS) have attracted external financing in 2005. The results from the scientific work in 2005 were also meaningful, especially the international publications that comprise (including those *in press*) 63 papers, 8 book chapters and 45 abstracts in Congresses.

The present report provides an overall view of the ICVS's main progresses and activities in 2005 and the underlying strategies. Furthermore, a self-assessment of the activities developed in 2005 in comparison with the two former years, 2003 and 2004, is also presented.

## **2. STRATEGIES AND OBJECTIVES FOR 2005**

The ICVS intends to be not just one more research unit, but rather, a novel research unit. To achieve this goal, the underlying strategy defined for the development of the ICVS (presented in former Reports - 2003 and 2004 - available at ECS/ICVS web page) is based on consolidation and integration.

In accordance, the main objectives established for 2005 were (i) to continue the ICVS integrative policy of strengthening the critical mass of the research groups and the consolidation of the research projects, (ii) to proceed the post-graduation activities and (iii) to continue the preparation of proper facilities and equipments, including the enhancement of the clinical research infrastructure by expanding clinical research activities.

Therefore, the specific aims established for 2005 were the following:

- maintain the conditions for a steady participation of the academic staff in research projects and for attracting new researchers on fellowships;
- enhance the scientific production by at least 30-40% and expand funded collaborative research projects, particularly at the international level;
- proceed with the post-graduation programmes, including the MD/PhD programme formally approved by the University;
- actively pursue the complement of the contract established with the FCT for the ICVS's financing;
- actively seek other funding sources.

### **3. ORGANIZATION AND MANAGEMENT**

Following the ICVS implemented integrative policy, the research activities are presently organized at the level of Research Domains and respective Principal Investigators (PIs).

The ICVS governing bodies have been consolidated during 2005 and presently are:

- The Scientific Council;
- The Director, that liaises with the Scientific Council;
- The Directive Board;
- The External Advisory Committee.

The composition of the ICVS governing bodies in 2005 was the following:

### **Scientific Council**

(All ICVS members with a doctoral degree)

#### *Permanent Members*

- Adhemar Longatto Filho
- António Gil Pereira de Castro
- Armando Alberto Nova Pinto de Almeida
- Fernando José dos Santos Rodrigues
- Isabel Maria Mestre Marques Palmeirim Alfarra Esteves
- Joana Cancela de Amorim Falcão Paredes
- Joana de Almeida Santos Pacheco Palha
- João Carlos Cruz Sousa
- Jorge Manuel Nunes Correia Pinto
- Jorge Manuel Rolo Pedrosa
- Manuel João Tavares Mendes da Costa
- Maria Cecília Lemos Pinto Estrela Leão
- Maria de Fátima Monginho Baltazar
- Nuno Jorge Carvalho de Sousa
- Patrícia Espinheira Sá Maciel
- Paula Cristina da Costa Alves Monteiro Ludovico
- Raquel Gláucia Varzielas Pêgo de Andrade
- Rui Manuel Vieira Reis
- Rute Carina da Silva Moura

#### *Invited Members*

- Fernando Carlos de Lander Schmitt

The Scientific Council meets on a monthly basis, concentrating its activities on the (i) planning of the ICVS development, (ii) evaluation of the activities, (iii) establishment of guidelines and (iv) reinforcement of the links within the ICVS research groups and with other research institutions.

**The ICVS Directive Board**, internally nominated by the Scientific Council, integrates the Director of the ICVS, one representative of each of the three main research domains and one representative from the ECS Directive Board. Its present composition is:

- Maria Cecília Lemos Pinto Estrela Leão (Director)
- Jorge Manuel Rolo Pedrosa (representative of ECS Directive Board)
- Armando Alberto Nova Pinto de Almeida (representative of “Neurosciences”)
- Paula Cristina da Costa Monteiro Alves Ludovico (representative of “Infectious Diseases”)
- Isabel Maria Mestre Marques Palmeirim Alfarra Esteves (representative of “Development and Neoplasia”)

The ICVS Directive Board meets on a fortnightly basis, concentrating its activities on (i) monitoring the ongoing activities, (ii) establishing the operating rules for the shared equipment in order to guarantee its rational and optimal use, (iii) determining the sharing of running expenses and (iv) planning the ICVS funding.

**The External Advisory Committee**, which was appointed at the end of 2005, integrates three international experts. Its present composition as follows.

- Marina Bentivoglio

Full Professor, Medical Faculty, University of Verona, ITALY

- Alan Flake

Full Professor, the University of Pennsylvania School of Medicine, Philadelphia, USA

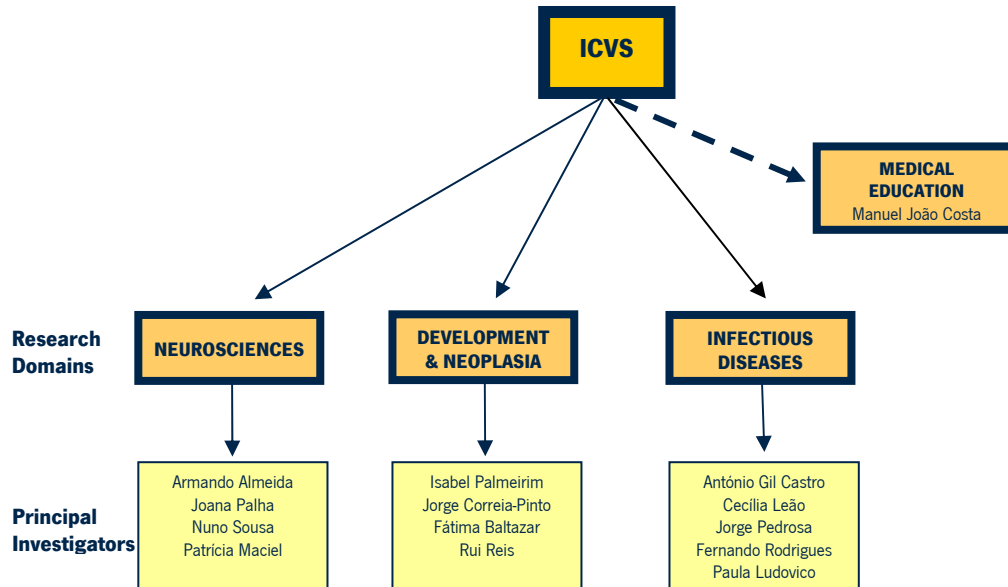
- Paulo Vieira

Chargé de Recherche, Pasteur Institute, Paris, FRANCE

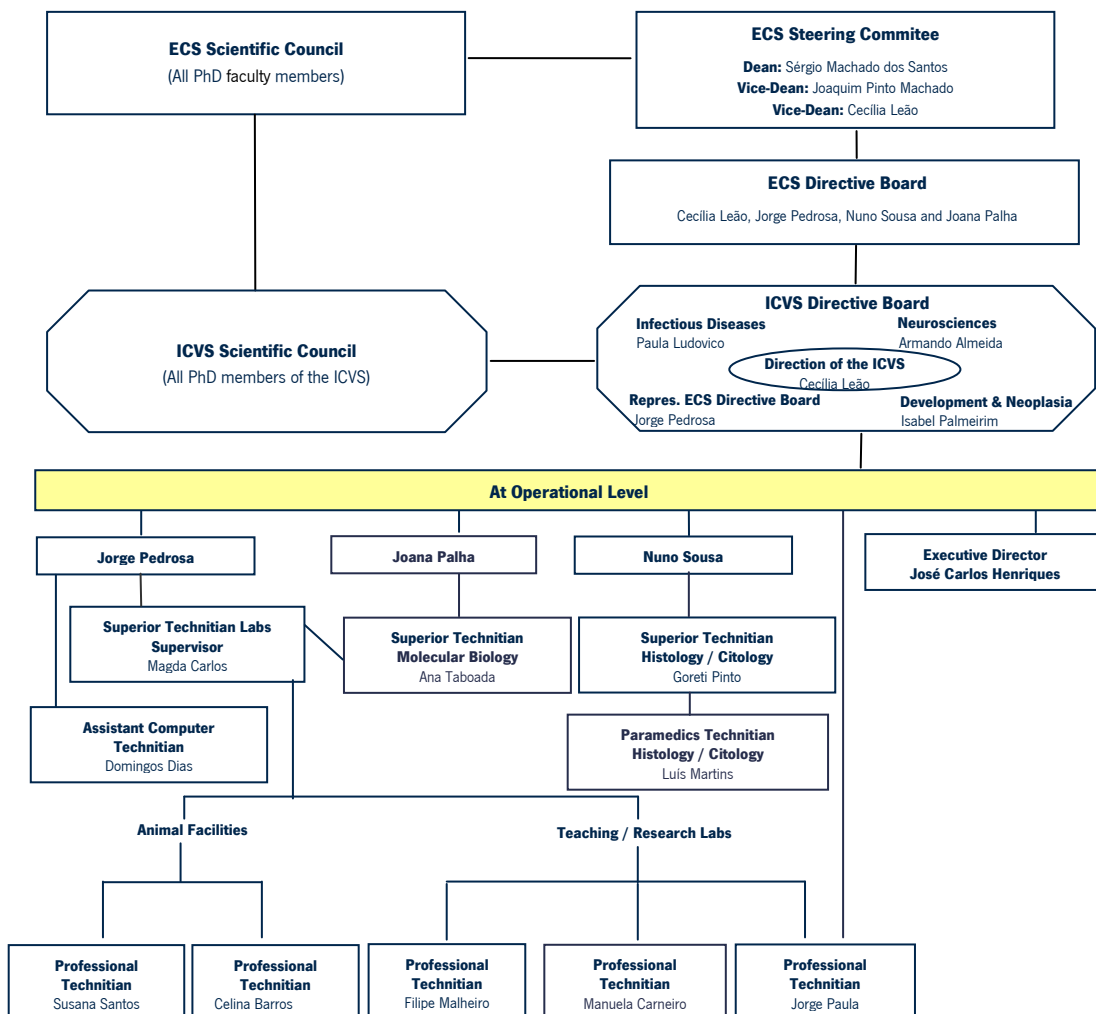
The first EAC site-visit will take place in next May-June, 2006.

In Figures 1 and 2 are representative diagrams of the ICVS research organization and management.

**Fig. 1.** Research Organization Levels



**Fig. 2.** Organization and Management





## **4. ACTIVITIES IN 2005**

### **4.1. Staff Development: Strategies and Policies**

#### **4.1.1. Development and Management of the Academic Staff**

The members of the academic staff of ECS play a central role within the scientific teams of ICVS. In fact, at the present stage, all ICVS PIs are faculty members of ECS and represent around 70% of the PhD members of the institute.

Accordingly, in the recruitment of the ECS academic staff, particular attention was given to the scientific curricula as well as to teaching qualifications. The ECS has been investing on the discussion of the policy concerning the development and management of the academic staff. In this context, two important documents were approved. They are included in the Annual Report | 2005 of the School (available at the *web* page of the School).

One of these documents - "Standards Related to the Required Profiles for Professorship at the ECS" - refers to the standards established by the ECS in regard to the required profiles for professorship in each of the ranks of the academic career. It is an important reference paper that will act as an incentive to the faculty and contribute to the embedding of a culture for quality, including its scientific production. This is a crucial question for the ECS and the ICVS, in view of the strict requirements for quality and innovation inherent to their creation.

The second document - "A Model for the Allocation of Workload to Pedagogic and Scientific Activities" - establishes a model for the allocation of workload to the different functions performed by the academic staff.

The way teaching is organised at the ECS implies that teachers have periods of intensive contact with the students along one or more modules, alternating with periods of intensive research activity. Consequently, there is the need to develop a model to estimate the equivalent to fixed weekly teaching loads. This has also the advantage of allowing a better perception of the annual workloads dedicated to pedagogic and to research activities, being that, on average, the faculty dedicates 57.5% of the annual workload to research activities and 42.5% to pedagogic activities.

#### **4.1.2. Stimulation to high quality scientific production by ICVS**

The ICVS is paying careful attention to the promotion of the quality of scientific production by the different ICVS Research Domains. In 2005, one important step in this direction was the implementation of the following strategic actions:

- a) Attribution of an Annual Prize to the ICVS Research Domain (Infectious Diseases, Neuroscience and Development-Neoplasia) that published the paper in an International Journals with the highest Impact Factor, given that one domain member (i) is the first or last author and (ii) has the ICVS as main institutional affiliation.  
PRIZE: 7 500 Euros
- b) Attribution of an Annual Prize to the ICVS Research Domain with the highest Total Impact Factor per PhD member, considering all papers published in International Journals, given that each paper has a domain member (i) being the first or last author and (ii) presenting the ICVS as main institutional affiliation.  
PRIZE: 10 000 Euros
- c) Attribution of an Annual Prize to the ICVS Research Domain with the paper presenting the highest number of Citations in the 5 years following its publication, given that one domain member (i) is the first or last author

and (ii) has the ICVS as main institutional affiliation. The first edition of this Prize will be in 2008 and will recognize the 2003 ICVS paper presenting the highest number of citations during the period 2003-2007.

PRIZE: 5000 Euros

- d) Payment of the costs implicated in publishing papers in International Journals, until 750 Euros per article, after request submitted to the ICVS Directive Board.

#### **4.2. Ongoing Research Areas / Teams**

The full composition of the regular research staff, actualized at 31 January 2006, is summarized below and listed in *Appendix I* together with mention to their qualification, rank and scientific area.

The major research themes that are being developed in the scope of the three domains and the corresponding teams are presented below. More detailed information is available at ECS/ICVS web page.

#### **A. INFECTIOUS DISEASES**

##### ***Team***

- 6 PhDs (5 Faculty members and 1 Post-Doc)
- 7 PhD students
- 1 Master student
- 5 other graduated researchers

##### ***Research themes***

- Human genetic factors predisposing susceptibility to invasive fungal infections
- Development of new methodologies for characterization and diagnosis of clinically relevant fungi causing systemic mycosis
- Cellular and molecular studies in the pathogenic fungi *Paracoccidioides brasiliensis*: Dimorphism and its regulation by steroid hormones
- Epidemiology profile of dermatophytosis in Braga
- Elucidation of the mechanisms of action of non-conventional antifungal agents
- Exploitation of yeast as a model to study mitochondrial diseases and neurodegenerative disorders
- Apoptotic pathway(s) in *Saccharomyces cerevisiae*: proteomic profile and metacaspase-interactive molecules
- Identification of pathogenic fungi secreted compounds
- Biology of infection in mycobacteriosis of difficult treatment- Buruli Ulcer
- Understanding BCG infection/vaccination; role of IFN-gamma and IL-17
- Role of anti-inflammatory cytokines in allograft rejection
- Expression and activation of murine Toll-like receptors in B lymphocytes
- Development of drug delivery systems for the treatment of mycobacteriosis

## **B. NEUROSCIENCES**

### ***Team***

- 6 PhDs (5 Faculty members and 1 Post-Doc)
- 18 PhD students
- 1 Master student
- 12 other graduated researchers

### ***Research themes***

- Neuronal turnover regulation and its relevance for pathology
- Stress, cognition and pain: the role of corticosteroids and corticotrophic releasing factor
- Descending pain modulating networks
- Anatomical basis for the sensorymotor processing in the laryngeal mucosa
- Improving treatment of trigeminal neuralgia (TN) and epidemiology of TN in Portugal
- Studies on the role of transthyretin in energy metabolism
- The role of choroid plexus proteins in brain inflammation
- Molecular basis of schizophrenia: the retinoid and thyroid hormone hypotheses
- Characterization of the iodine status in young women from Minho region and its relationship with the psychomotor development of the newborns
- Functional genomics of Machado-Joseph disease
- Molecular basis of Rett syndrome
- Functional characterization of the *MECP2* 3'UTR

## **C. DEVELOPMENT AND NEOPLASIA**

### ***Team***

- 8 PhDs (4 Faculty members and 4 Post-Doc)
- 12 PhD students
- 1 Master student
- 11 other graduated researchers

### ***Research themes***

- Analysis of myoepithelial component role in breast cancer development
- Analysis of DNA repair gene polymorphisms in a group of breast cancer patients from Portuguese origin
- Study of lymphangiogenesis in vascular lesions and breast cancer
- Therapeutic targets in breast cancer
- Mechanisms of invasion in breast cancer
- Study of the role of P-cadherin in breast cancer
- Study of molecular predictive factors of chemotherapy response in glioma tumours
- Role of COX-2 and TP in the pathogenesis of hand and foot syndrome induced by capecitabine
- Role of COX-2 in the pathogenesis of hemorrhagic cystitis induced by Ifosfamide
- Evaluation of the effect of somatostatin analogs in the inhibition of angiogenesis
- Genetic alterations of epidermal growth factor receptor in solid tumours

- Analysis of receptor tyrosine kinases and intracellular signalling pathway alterations in gliomas
- The molecular clock is operating during limb bud development
- Characterization of the molecular clock components by using the yeast Two-Hybrid technology
- Subtraction screening to identify medial presomitic mesoderm genes
- Molecular and temporal characterization of the rostral-most somites in early somitic stages of the chick embryo
- Control of the anteroposterior patterning of axis and the somitogenesis processes
- The role of ghrelin in normal and hypoplastic fetal lung
- Prognostic factors in experimental and human congenital diaphragmatic hernia (CDH)
- The role of inflammatory mediators in normal and hypoplastic lung
- Induction of fetal lung growth by overexpression of growth factors through viral gene transfer in CDH rat model
- Myocardium hypertrophy and pregnancy
- Fetal heart development in congenital diaphragmatic hernia
- Development of techniques for scarless surgery

**D.** A Medical Education research line is beginning its activity. The team is presently composed of 1 PhD. However, the process of defining the research lines and building a team is still emerging.

#### **4.3. Externally Funded Projects**

There are 25 ongoing projects coordinated by ICVS members (PIs) with external funding from: FCT (15 projects), Calouste Gulbenkian Foundation (4 projects), CRUP (1 project), *Agência de Inovação* (2 projects), Schering-Plough Farma, Lda (1 project), *Sociedade Portuguesa de Cardiologia* (1 project) and *Sociedade Portuguesa de Urologia* (1 project). The list of these ongoing projects is presented in *Appendix II* and includes the projects that have been submitted both after the PIs' integration in the ICVS, and before their integration (therefore, as members of their former research units). From this list, fourteen multidisciplinary research projects have attracted external financing in 2005, of which ten are led by ICVS staff members.

#### **4.4. Scientific Production by ICVS Members in 2005**

The national and international publications in 2005 are summarized below and their detailed lists are presented in *Appendix III*.

##### **A. International Publications**

(it includes those *in press*; IF: Journal's Impact Factor)

- 63 papers  
(IF=20.65: 1 paper; 4.5 ≤ IF < 8: 11 papers; 2 ≤ IF < 4.5: 21 papers; IF < 2: 22 papers; without IF allocated: 8 papers)
- 8 book chapters
- 45 abstracts in Congresses

## **B. Patents**

- Portuguese patent (INPI number: 103277): "DNA fragments and primers for the detection and identification of *Candida* species of clinical relevance".

## **C. National Publications**

- 2 papers
- 3 book chapters
- 9 abstracts published in Journal Supplements
- 22 communications (posters) presented in National Congresses

## **D. Conferences, Seminars and other Communications**

- 46 communications at Conferences, Seminars and other events

## **E. Research Prizes**

### ***Internal ICVS Prizes***

(see above 4.1.2)

- Annual Prize to the ICVS Research Domain that published the paper in the International Journal with highest IF: "Development and Neoplasia"; Nature Cell Biology, IF= 20.65
- Annual Prize to the ICVS Research Domain with the highest Total IF per PhD member: "Neurosciences"; Total IF=12.59

### ***External Prizes***

- "Prize Pfizer in Basic Research", with the study "*terra is a left-right asymmetry gene required for left-right synchronization of the segmentation clock*"
- "2<sup>nd</sup> Prize Grunenthal – Pain 2005", with the study "*Brain projections to the medullary dorsal reticular nucleus, with special emphasis on the endogenous pain control system: an anterograde and retrograde tracing study in the rat*"
- "Prize for the best Portuguese paper published in an international journal with referee" of the Portuguese Society of Pneumology/AstraZeneca with the study "*Endogenous production of ghrelin and beneficial effects of its exogenous administration in monocrotaline-induced hypertension*"
- Prizes for the best communications presented at international and national congresses (posters or oral presentation): 9 prizes awarded to researchers of the ICVS.

The detailed list of these Prizes is presented in *Appendix III*.

## **F. PhD and Master's Thesis**

Presently, there are the following theses under development supervised by ICVS PI researchers:

- 39 PhD theses, 37 of which are registered at the ICVS;
- 7 Master theses, 3 of which are registered at the ICVS.

In 2005, 4 PhD and 2 Master theses of students not registered at ICVS, but supervised by ICVS PIs researchers, were concluded.

A detailed list, comprising PhD, Master and other graduated Students with information on Themes and Supervisors is presented in *Appendix IV*.

#### **4.5. Other Research / Academic Activities**

##### **A. Participation in Bilateral Actions**

1. "Glucocorticoid regulation of mood and cognition relevant neural substrates"  
Principal Investigators: Nuno Sousa (ICVS, Portugal) and Osborne Almeida (Germany).  
Duration: 2005-2006.

##### **B. Participation in International Networks**

*Isabel Palmeirim*

- Member of the "EU network of excellence on the development of mesodermal organ systems".

*Patrícia Maciel*

- Member of the international consortium for the study of the genetic susceptibility to Multiple Sclerosis – "GAMES - Genetic Analysis of Multiple Sclerosis in the EuropeanS".

*Rui M. Reis*

- Portuguese Member of "COST - European Cooperation in the field of Scientific and Technological Research", "Action B19 - Molecular cytogenetics of solid tumours", "Working Group 4 - DNA technologies".

*Manuel João Costa*

- Representative of the School of Health Sciences in the "MEDINE – Medical Education in Europe Network".

##### **C. Participation in Evaluation Panels**

1. Leão C., Member of FCT evaluation panels for Master, PhD and Post-Doc grants
2. Leão C., "Agência de Inovação/FCT", external evaluator for project applications
3. Palha JA., Evaluator for the National Science Foundation (USA)

##### **D. Membership of the Editorial Board of National / International Journals**

1. Palha JA., Guest editor, Genes, Brain and Behavior. 2005
2. Leão C., Member of Direction Committee of the National Microbiology Society
3. Leão C., Member of National Scientific Committee (FCT) for Biology and Biotechnology
4. Leão C., Member of the Editorial Board of the international journal "Microbiology"

5. Leão C., Member of the Editorial Board of the international journal "FEMS Yeast Research"
6. Leão C., Member of the International Commission for Yeasts – ICY
7. Ludovico P., Assistant Editor of the Scientific Journal of Food, Agriculture & Environment
8. Rodrigues F., Assistant Editor of the Scientific Journal of Food, Agriculture & Environment

#### **E. Organization of Scientific Meetings and Presence in Scientific Committees**

1. Almeida A., Organization of the Meeting “Dia Mundial da Voz”, University of Minho, Braga, Portugal, 16<sup>th</sup> April 2005
2. Leão C., Member of the Scientific Committee of the “Micro’05-Biotec’05”, Póvoa de Varzim, Portugal, 31<sup>st</sup> of November-1<sup>st</sup> of December 2005
3. Palmeirim I., Organization of the “Network of excellence: Cells into organs” Plenary meeting – 20-21 April 2005
4. Palmeirim I., Organization of the Workpackage somitogenesis meeting. 23 April 2005
5. Rodrigues F., Member of the Scientific Committee of the “Micro’05-Biotec’05”, Póvoa de Varzim, Portugal, November 31<sup>st</sup> - December 1<sup>st</sup> 2005

#### **F. Participation in Academic Juries**

In 2005, 10 ICVS PIs (from the faculty staff) integrated 28 academic juries for Master Degree (9), PhD degree (10), Scientific Coordinator (1), Associate Professor (7) and Full Professor (1).

The detailed information is in *Appendix III*

#### **G. Collaboration with National and International Research Institutions**

Besides the cooperations with several Research Centres within the University of Minho, the ICVS keeps regular cooperation with several national and international research institutions. This information is available at ECS/ICVS web page.

#### **4.6. Scientific Seminars at ICVS - “Ciência Falada no ICVS”**

The so called “Ciência Falada no ICVS” was institutionalised in 2003, consisting on regular seminars held on a weekly basis. Internal and external scientists were invited to present their work. In 2005, 38 seminars were organized: 17 by PhD students, 2 by Master students, 1 by a Post-doc, 9 by the PIs of the different research groups and 9 by external invited researchers.

The list of these seminars is presented in *Appendix V*.

#### **4.7. Post-Graduation Programme | 2005**

##### **4.7.1. Advanced Courses and Workshops**

In 2005, and for the fifth consecutive year, we continued to invest in offering highly specialized training for medical doctors and investigators in life and health sciences. To run this programme we found support of the following institutions: “Fundação Luso-Americana para o Desenvolvimento” and “Fundação Calouste Gulbenkian”, as well as of

several companies (Alfagene, Baptista Marques, Bioportugal, BIORAD, Bonsai Technologies, Bristol-Myers Squibb, Delta Cafés, Elnor, ENZifarma, Frilabo, Hemoportugal, GE Healthcare, Labometer, Paci, Reagente 5, Roche, Sarstedt and Tadinense). We are grateful to our sponsors for helping us to present a diverse program of courses and workshops on life and health sciences.

The 2005 post-graduation programme included the courses and workshops listed below. Detailed information of the programme is available at <http://www.ecsaude.uminho.pt/postgrad>

### ***Advanced Courses***

1. "Psychomotor Development Evaluation of Newborns", 1-3 June  
Coordinators: Joana Palha, Maria José Costeira
2. "From Acute to Chronic Pain", 18-22 July  
Coordinators: Armando Almeida, Laurinda Lemos
3. "Application and Development of Instructional Software in Biosciences", July 25-29  
Coordinators: Guilherme Marson, Manuel João Costa
4. "Multiple Sclerosis: evaluation, management and rehabilitation of cognitive deficits", September 8-10  
Coordinators: Patrícia Maciel, Nuno Sousa, Maria Edite Rio
5. "Different Tissues, same Strategies: common molecules in different development systems", September 15-17  
Coordinators: Isabel Palmeirim
6. "Host-Parasite Interactions in Fungal Infections", October 27-29  
Coordinators: Jorge Pedrosa, Manuel Vilanova, Fernando Rodrigues
7. "Cerebral Sulci and Gyri: neuroanatomy" (2<sup>nd</sup> Edition), November 14-18  
Coordinators: Nuno Sousa, Carlos Alegria

### ***Workshops***

8. "Angiogenesis and Lymphangiogenesis in clinical Practice: from basic research to applications", February 26  
Coordinators: Fernando Schmitt, Adhemar Longatto Filho, Fernanda Milanezi, Rui M. Reis
9. "Effective Teaching", May 9-10  
Coordinators: Richard Felder, Rebecca Brent
10. "Learning Problems in Children with Emotional and Behavior Disorders", May 12-13  
Coordinators: Roger Thomas, João Lopes, Manuel João Costa



#### 4.7.2. Global Evaluation of the Programme

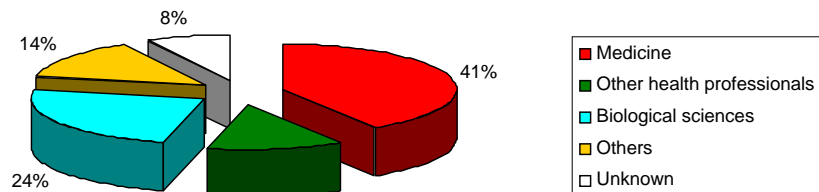
The objectives set for the 2005 Post-Graduation Programme were mainly fulfilled.

Training on medical education was offered for the first time. Particularly successful, the course on Effective Teaching opened new perspectives for the year 2006 in which additional workshops are already planned. It is our intention to develop this as an area of research and to promote activities to develop individual's abilities to teach.

One of the courses (Different Tissues, Same Strategies: common molecules in different development systems) was integrated within an European Network of Excellence: "Cells into Organs".

The second edition of the course on neurosurgery (Cerebral Sulci and Gyri: neuroanatomy) reinforces our intention to install, in the new facilities, a laboratory of microsurgery for advanced training. Both this and the course on the mechanisms of pain (From Acute to Chronic Pain: basic and clinical approaches) were offered as second editions, which clearly suggest that these areas are of demand among clinicians.

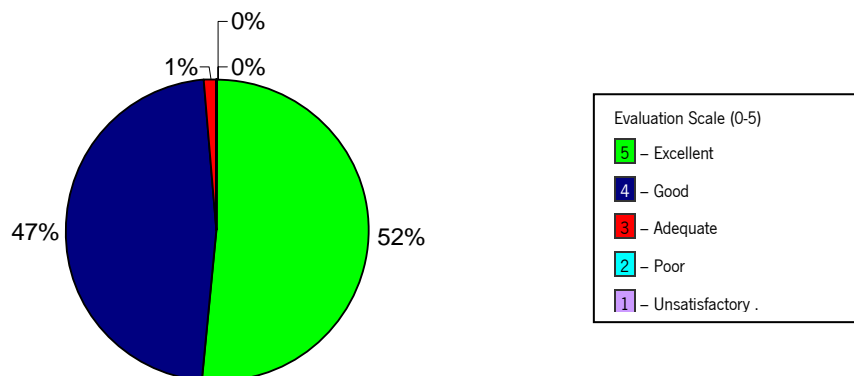
The backgrounds of the participants in the post-graduation programme are summarized in the figure below.



**Fig. 3.** Background distribution of the participants

A questionnaire was filled by most of the participants (234 out of 354) to evaluate several aspects of each course.

The overall evaluation, done in a scale of 0-5 (from Unsatisfactory to Excellent), provided the following results:



**Fig. 4.** Evaluation of the Programme by the participants

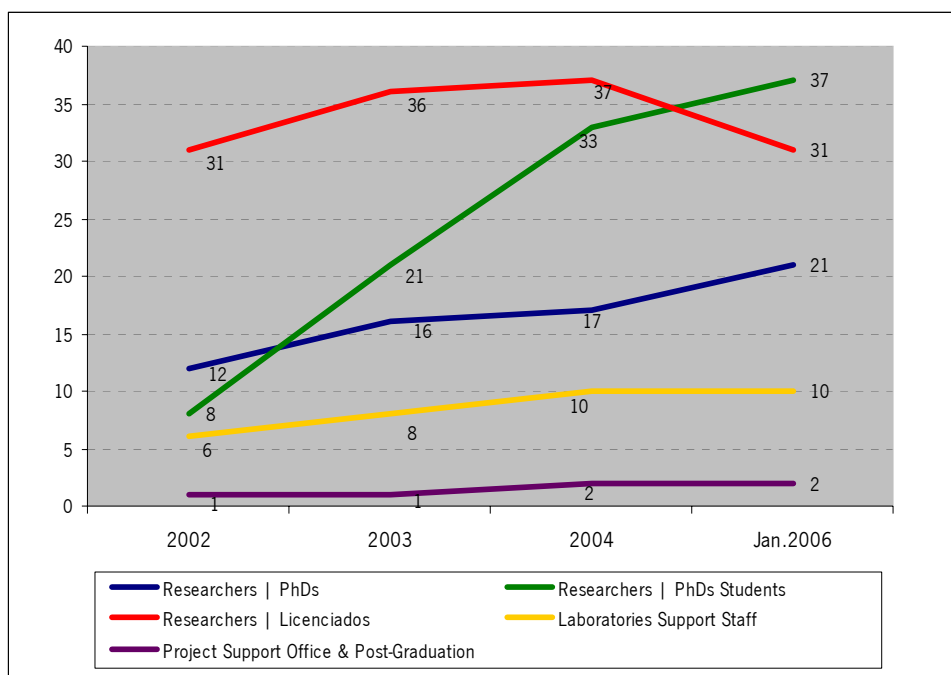
In most cases, participants considered that the courses should be continued in years to come, and would recommend it to a peer, which represents a great incentive to continue and consolidate our programme.

## 5. THE ICVS PROGRESSION IN THE PERIOD 2002-2005

### 5.1. Human Resources

Since its creation, there was a significant expansion of human resources in ICVS, which allowed the consolidation of the research groups. Fig. 5 clearly shows the significant expansion of the human resources, namely the research staff, especially in 2003. On the other hand, it is also clear that the number of PhD students increased along the three years, while the number of Researchers | *Licenciados* decreased, which indicates a progression in the scientific differentiation of the ICVS staff. Moreover, in 2005 an increase in the number of Post-Docs was already noticeable, even though still beyond our goal (at least three per research domain). This is a challenge we hope to fulfil in the near future.

	2002	2003	2004	2005 (actualized at 31-01-06)
<b>Researchers   PhDs Total</b>	<b>12</b>	<b>16</b>	<b>17</b>	<b>21</b>
- Pls	(11)	(13)	(14)	(15)
- Post-Docs	(1)	(3)	(3)	(6)
<b>Researchers   PhDs Students</b>	<b>8</b>	<b>21</b>	<b>33</b>	<b>37</b>
<b>Researchers   <i>Licenciados</i></b>	<b>31</b>	<b>36</b>	<b>37</b>	<b>31</b>
<b>Laboratories Support Staff</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>10</b>
<b>Project Support Office &amp; Post-Graduation</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>
<b>TOTAL</b>	<b>58</b>	<b>82</b>	<b>100</b>	<b>101</b>



**Fig. 5.** ICVS Progression of Human Resources

## **5.2. Facilities and Laboratory Management**

Detailed information about the ICVS facilities is available at the *web* page of the School. In 2005 it was possible to expand some research areas that allowed:

- the installation of a radioisotopes room;
- the installation of a gamma-counter room;
- the expansion of the area for animal experimentation.

The reinforcement of equipment included a gamma-counter and equipment to work with radioactive materials, thermocyclers, software and equipment for flow cytometry, equipments for behavioural studies, orbital shakers and incubators, a spectrophotometer, a fluorescence microscope with digital camera and software, a stereology microscope with image analysis system, a gastroscope, ventilated racks and cages for rodents.

In the meanwhile, the ICVS has launched a process for the setting up of a Microscopy Center in the UM, with the partnership of other research units of the university. This center will be installed in the ICVS and will include Units of Confocal Microscopy with specific characteristics, as well as a Microscope for Microdissection. This structure will be run by a specialized technician that will provide services to several research groups in UM.

Regarding the management of the ICVS laboratories, important improvements were implemented by introducing four specifically developed software applications. These programs concern the management of: purchase ordering and projects' budget control; consumable's stocks; maintenance of scientific equipments; and colonies of the animal facility.

These applications considerably increased the efficacy of laboratory management and relieved the researchers and the technical staff from administrative, time-consuming tasks. For the laboratory technicians, it was possible to reduce the time devoted to these non-scientific tasks in 40%.

## **5.3. Financial Resources**

The School, in order to complement the contract signed with the Government in 2000, as was then foreseen, proposed in 2003 a special contract to the Ministry of Science and Higher Education for the infrastructural funding of the ICVS, involving a total amount of 4.2 million Euros over a period of three years, with 20% co-partnership from the School. The proposal was approved and the contract was signed in March 2004, but with a funding of only about 20% of the proposed value, although with an indication that the remaining should be considered for further funding from the FCT. Finally, in March 2005, a proposal from the FCT to the Minister was approved, allocating funding for the most urgent laboratory equipments, which represents a significant achievement.

Summarizing, the following pluriannual contracts were presently signed for ICVS funding.:

1. The FCT pluriannual funding, both basal and programmatic, from January 2003 to January 2006:
  - Basal: 202 500 Euros over 3 years, of which 64 910 Euros were actually transferred in 2005
  - Programmatic: 90 000 Euros over 3 years, of which 77 836 Euros were actually transferred in 2005
2. The contract signed by the Ministry of Science and Higher Education in March 2004, for the infrastructural funding of the ICVS, over a period of three years:

- Total amount of 795 380 Euros (with 20% co-partnership from the ECS), of which 206 592 Euros were actually transferred in 2005
3. The proposal, from the FCT to the Ministry of Science and Higher Education, approved in March 2005 (to complement the contract signed in 2004):
- Total amount of 1.5 million Euros, over a period of three years (up to 2007), of which only 100 000 Euros were actually transferred in 2005

Besides the above funding, the research projects running at ICVS also had external funding from FCT (15 projects), Calouste Gulbenkian Foundation (4 projects), CRUP (1 project) and *Agência de Inovação* (2 projects) and other external financing institutions (3 projects) in a total amount of about 1.5 million Euros over three years, of which 327 230 were actual income in 2005.

In conclusion, in the year 2005 the ICVS had a total external income of around 0.8 million Euros.

Notwithstanding the external financing granted in 2005, the ECS continued to assure the maintenance costs of facilities and general expenses to all research groups.

#### **5.4. Scientific Results**

The main results achieved in 2005, compared with those from 2003 and 2004, are summarised in Table 1.

As it can be seen, the scientific production of the ICVS members, expressed by the international scientific production indicators (papers and book chapters) increased:

- in 2004 by about 37% - comparatively to 2003;
- in 2005 by about 49% - comparatively to 2004.

**Table 1.** Evolution of the scientific production in 2003, 2004 and 2005

<b>Scientific Production</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>International publications</b>			
<i>Papers</i> (those <i>in press</i> are not included) *	<b>25</b>	<b>36</b>	<b>49</b>
<i>Book Chapters</i> (those <i>in press</i> are not included) *	<b>2</b>	<b>1</b>	<b>6</b>
<i>Abstracts in Congresses</i>	<b>40</b>	<b>60</b>	<b>45</b>
<b>National publications</b>			
<i>Papers</i>	<b>1</b>	<b>5</b>	<b>2</b>
<i>Book Chapters</i>	<b>1</b>	<b>2</b>	<b>3</b>
<i>Abstracts in Journal Supplements and in Congresses</i>	<b>23</b>	<b>28</b>	<b>31</b>
<b>Thesis concluded</b>			
<i>PhD thesis</i>		<b>1</b>	<b>3**</b>
<i>Master thesis **</i>	<b>2</b>	<b>1</b>	<b>2</b>
<i>Undergraduate thesis</i>	<b>10</b>		
<b>Thesis under development</b>			
<i>PhD thesis</i>	<b>18</b>	<b>32</b>	<b>36</b>
<i>Master Thesis</i>	<b>2</b>	<b>7</b>	<b>8</b>
<b>Scientific research prizes</b>	<b>5</b>	<b>10</b>	<b>11</b>
<b>Post-graduation courses and Workshops organized by the ICVS</b>	<b>6</b>	<b>10</b>	<b>10</b>

\* In this pluriannual analysis the publications *in press* were not considered, while in the annual analysis of scientific production presented in 4.3.2 above they were included.

\*\* Theses of students not registered at ICVS, but supervised by ICVS PIs

## **6. PLANNING FOR 2006**

The three main research domains are now established. Strong interactions between the three research domains are being fostered.

We intend to strengthen our scientific production by enhancing the number of publications as well as their quality (expressed by the publication Journals' Impact Factor), and expand funded collaborative research projects.

The post-graduation programmes should be maintained and an effort should be done to promote a programme for continuous biomedical education.

The beginning of the MD/PhD programme in 2006, for which we count with the collaboration of the Thomas Jefferson Medical School and the Columbia University Medical School, will be another major challenge for 2006 and following years.

Moreover, one important goal of the ICVS for the years to come is to enhance the clinical research. This task is viewed as a critical tool to foster the productivity of physician-scientists who will strengthen translational research in academic health centres, both through their own studies as well as their mentoring of the next generation of physician-scientist trainees.

Therefore, the specific aims for 2006 are the following:

- increase the number of Post Docs for at least 50% and expand funded collaborative research projects, including at least 1 at international level;
- enhance the scientific production of the ICVS by at least 20% in the Total Impact Factor;
- increase the number of independent clinical research investigators for at least 25% of their working time, in order to competitively apply for general clinical research funding;
- maintain the promotion and recognition of scientific excellence by granting internal awards;
- promote the divulgation of ICVS activities in the community;
- actively pursue the complement of the contract established with the FCT for the ICVS's funding.

We continue aware of the crucial importance of diversification of funding sources reducing as much as possible the ICVS funding by the ECS.

Finally, the new building for the School of Health Sciences, to be completed by the end of 2007 which includes a specific area for the ICVS with 6 000 m<sup>2</sup>, will be one of our major challenges, particularly in what concerns its planning and external funding for laboratory facilities.

## **7. FINAL REMARKS**

The analysis of the present report illustrates a positive progression of the scientific production (both quantitatively and qualitatively) of the ICVS. In addition, the enthusiasm, commitment, availability and competence of this scientific community – faculty, staff, and students – constitutes also a major achievement of the Institute.

The **strong** points of ICVS include:

- the recognition of the ICVS by the FCT, ranked as Excellent;
- the increasing number and scientific quality of the ICVS publications;
- the standards of the facilities, in spite of their provisional status, and its function-oriented organisation;
- the innovative coordination and management procedures;
- the continuous support from the Rector and the University;
- the construction of the new School building, that already started, after a heavy bureaucratic process.

The main **weaknesses** are the limitations associated to the ICVS facilities. In this context, it is essential that the construction works of the new School building proceed efficiently.

The capacity to rise sustainable funding is also a critical issue, as well as the necessary scientific “critical mass” of differentiated researchers, namely at the post-doc level.

In conclusion, it is our deep conviction that, albeit the above difficulties, the main goals for 2005 were achieved through the constant institutional support of the School together with the enthusiasm and commitment of all ICVS Members.

The goals that we have set forth for 2006 seem attainable and will enable the ICVS to consolidate the high standards of quality in its collective and individual achievements, as a “Research Unit of International Excellence in Life and Health Sciences” within a Medical School.

Cecília Leão  
Director of the Life and Health Sciences Research Institute  
January, 2006

## **APPENDICES**

### **APPENDIX I**

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### **APPENDIX III**

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*Scientific Seminars at ICVS – “Ciência Falada no ICVS”*



## **APPENDIX I**

### *List of Researchers and Support Staff at the ICVS*

## I.1 PhD RESEARCHERS

Name	Qualification	ECS Position (Rank)	ICVS Status / Research Domain
António Gil Pereira de Castro	PhD	<i>Prof. Auxiliar Exc.</i>	PI / Infectious Diseases
Fernando José Santos Rodrigues	PhD	<i>Prof. Auxiliar Exc.</i>	PI / Infectious Diseases
Jorge Manuel Rolo Pedrosa	PhD	<i>Prof. Associado Exc.</i>	PI / Infectious Diseases
Maria Cecília L. P. Estrela Leão	PhD	<i>Prof. Catedrático Exc.</i>	ICVS Director / Infectious Diseases
Paula Cristina C. A. M. Ludovico	PhD	<i>Prof. Auxiliar Exc.</i>	PI / Infectious Diseases
António Pedro Barros Gomes	PhD	_____	Post-doc / Infectious Diseases
Armando Alberto N. Pinto Almeida	PhD	<i>Prof. Auxiliar Exc</i>	PI / Neurosciences
Joana Almeida S. Pacheco Palha	PhD	<i>Prof Associado Exc.</i>	PI / Neurosciences
Nuno Jorge Carvalho de Sousa	MD/PhD	<i>Prof Associado</i>	PI / Neurosciences
Patrícia Espinheira de Sá Maciel	PhD	<i>Prof. Auxiliar Exc</i>	PI / Neurosciences
João Carlos Cruz Sousa	PhD	<i>Prof. Auxiliar Conv. 30%</i>	Post-doc / Neurosciences
António José B. O. Gomes Salgado	PhD	_____	Post-doc / Neurosciences
Isabel Mª Palmeirim A. Esteves	MD/PhD	<i>Prof. Auxiliar Exc</i>	PI / Development & Neoplasia
Jorge Manuel Correia Pinto	MD/PhD	<i>Prof Associado Conv 50%</i>	PI / Development & Neoplasia
Maria de Fátima M. Baltazar	PhD	<i>Prof. Auxiliar Exc</i>	PI / Development & Neoplasia
Rui Manuel Vieira Reis	PhD	<i>Prof. Auxiliar Conv. Exc</i>	PI / Development & Neoplasia
Adhemar Longatto Filho	PhD	_____	Post-doc / Development & Neoplasia
Joana C. de Amorim F. Paredes	PhD	_____	Post-doc / Development & Neoplasia
Raquel G. V. Pêgo de Andrade	PhD	_____	Post-doc / Development & Neoplasia
Rute Carina Silva Moura	PhD	_____	Post-doc / Development & Neoplasia
Manuel João T. Mendes da Costa	PhD	<i>Prof. Auxiliar Exc (Requisitado)</i>	PI/Medical Education

## I.2 POST-GRADUATION Researchers

## I.2.1 PhD Students

Name	Qualification	ECS Position (Rank)	ICVS Status / Research Domain
Agostinho Albérico R. Carvalho	Lic.	_____	PhD stud. (BD) / Infectious Diseases
Agostinho J. R. Almeida	Lic.	_____	PhD stud. (BD) / Infectious Diseases
Andrea Patrícia Ribeiro da Cruz	Mast.	_____	PhD stud. (BD) / Infectious Diseases
Alexandra Gabriel Fraga	Lic.	_____	PhD stud. (BD) / Infectious Diseases

Bruno Miguel B. R. Almeida	Lic.	_____	PhD stud. (BD) / Infectious Diseases
Egídio Manuel Pires Torrado	Mast.	_____	PhD stud. (BD) / Infectious Diseases
Nuno Miguel Sampaio Osório	Lic.	_____	PhD stud. (BD) / Infectious Diseases
Ana João Gomes Rodrigues	Lic.	_____	PhD stud. (BD) / Neurosciences
Ana Raquel Marcelino Mesquita	Lic.	_____	PhD stud. (BD) / Neurosciences
Anabela Silva Fernandes	Lic.	_____	PhD stud. (BD) / Neurosciences
Dina Ruano Neto	Lic.	_____	PhD stud. (BD) / Neurosciences
Fernanda Cristina G. S. Marques	Lic.	_____	PhD stud. (BD) / Neurosciences
Filipa Santos Costa Pinto Ribeiro	Lic.	<i>Assistente Conv 100%</i>	PhD stud. / Neurosciences
João José F. Cardoso A. Cerqueira	MD	<i>Assistente Conv. 40%</i>	PhD stud. / Neurosciences
João Miguel Seiça Bessa Peixoto	MD	<i>Assistente Conv. 40%</i>	PhD stud. / Neurosciences
Jorge de Almeida Berkeley Cotter	MD	<i>Clinical Supervisor</i>	PhD stud. / Neurosciences
José M. Gomes Moreira Pêgo	MD	<i>Assistente Conv. 40%</i>	PhD stud. / Neurosciences
Laurinda M <sup>a</sup> S. Guimarães Lemos	MD		PhD stud. / Neurosciences
Manuel José Lima C. Rodrigues	MD	<i>Assistente Conv. 50%</i>	PhD stud. / Neurosciences
Maria do Carmo Pereira da Costa	Lic.	_____	PhD stud. (BD) / Neurosciences
Maria José T. C. Costeira Paulo	MD	<i>Clinical Tutor</i>	PhD stud. / Neurosciences
Maria Leonor Barbosa Gonçalves	Lic.	_____	PhD stud. (BD) / Neurosciences
Mário Jorge Alves Oliveira	MD	<i>Assistente Conv. 40%</i>	PhD stud. / Neurosciences
Mónica Joana Pinto Santos	Lic.	_____	PhD stud. (BD-IBMC) / Neurosciences
Rui Jorge de Freitas da Silva	Lic.	_____	PhD stud. (BD) / Neurosciences
André João A. M. S. Albergaria	MD	_____	PhD stud. (BD) / Development & Neoplasia
Bruno Filipe Marques Costa	Lic.	_____	PhD stud. (BD) / Development & Neoplasia
Estêvão Augusto Rodrigues Lima	MD	_____	PhD stud. / Development & Neoplasia
Jorge Sérgio Reis Filho	MD	_____	PhD stud. (BD) / Development & Neoplasia
Liliana Alexandra Osório Silva	Lic.	_____	PhD stud. (BD) / Development & Neoplasia
Maria de Fátima Pereira Duarte	Lic.	_____	PhD stud. / Development & Neoplasia
Maria João Ribeiro Leite Baptista	MD	<i>Assistente Conv. 40%</i>	PhD stud. / Development & Neoplasia
Marta Alexandra Ribeiro Santos	Lic.	_____	PhD stud. (BD) / Development & Neoplasia
Sandra Maria Araújo da Costa	Lic.	_____	PhD stud. (BD) / Development & Neoplasia
Sílvia Gonzaga da Silva Santos	Lic.	_____	PhD stud. (BD) / Development & Neoplasia
Sofia Machado da Cruz Cristóvão	Lic.	_____	PhD stud. (BD) / Development & Neoplasia
Susana Alexandra R. Pascoal	Lic.	_____	PhD stud. (BD) / Development & Neoplasia

### 1.2.2 *Master Students*

Name	Qualifications	ECS Position (Rank)	ICVS Status / Research Domain
Rodrigo Emanuel G. L. Oliveira	Lic.	_____	MSc stud. (BI) / Infectious Diseases
Maria José Barros Pereira	MD	_____	MSc stud. / Neurosciences
Isis Legath Alonso	Lic.	_____	MSc stud. / Development & Neoplasia

### 1.2.3 *Other Post-graduation Researchers*

Name	Qualifications	ECS Position (Rank)	ICVS Status / Research Domain
Ana Maria Macedo Mesquita	Lic.	_____	(BI) / Infectious Diseases
António Barroso	Lic.	_____	(BI) / Infectious Diseases
Maria de Belém Marques	Lic.	_____	(BI) / Infectious Diseases
Maria Inês Almeida	Lic.	_____	(BI) / Infectious Diseases
Jenny Andrea Carmona Valência	Lic.	_____	(BI) / Infectious Diseases
Ana Catarina Ribeiro Carrão	Lic.	_____	(BI) / Neurosciences
Ana Lúcia F. M. Valle Fernandes	Lic.	_____	- / Neurosciences
André Filipe Couto Carvalho	MD	<i>Assistente Conv. 40%</i>	- / Neurosciences
Andreia Cristiana T. de Castro	Lic.	_____	(BI) / Neurosciences
Eduardo Miguel G. Ferreira	Lic.	_____	(BI) / Neurosciences
Hugo Miguel Braga A. Tavares	MD	<i>Assistente Conv. 40%</i>	- / Neurosciences
Hugo Miguel Vale L. S. Almeida	Lic.	_____	(BI) / Neurosciences
Isabel Pinheiro Torres Marques	Lic.	_____	- / Neurosciences
Pedro Alexandre L. A. G. Teixeira	MD	<i>Assistente Conv. 40%</i>	- / Neurosciences
Ricardo Jorge Ferreira Taipa	MD	<i>Assistente Conv. 40%</i>	- / Neurosciences
Ricardo Manuel Duarte	Lic.	_____	(BI) / Neurosciences
Ana Lúcia Silva Gomes	Lic.	_____	(BI) / Development & Neoplasia
Carla Rolanda da Rocha Gonçalves	MD	<i>Assistente Conv. 40%</i>	- / Development & Neoplasia
Carlos Manuel Pereira	Lic.	_____	(BI) / Development & Neoplasia
Cristina Isabel Nogueira Silva	MD student	<i>Monitor</i>	- / Development & Neoplasia
Gustavo Filipe Melo A. Rocha	MD	<i>Assistente Conv. 40%</i>	- / Development & Neoplasia
João Paulo S. Fernandes	MD	<i>Assistente Conv. 40%</i>	- / Development & Neoplasia
José Mário Coutinho Roriz	MD	<i>Assistente Conv. 40%</i>	- / Development & Neoplasia
Luís Miguel Gonçalves Torrão	MD	<i>Assistente Conv. 40%</i>	- / Development & Neoplasia

Maria Fernanda Grillo Milanezi	MD	<i>Assistente Conv. 40%</i>	-/Development & Neoplasia
Rui Pedro da Rocha Bastos	MD	<i>Assistente Conv. 40%</i>	-/Development & Neoplasia
Sandra Mónica B. A. Ferreira	Lic.	_____	(BTI)/Development & Neoplasia

**Conv.** = partial dedication

**Exc.** = exclusive dedication

**Lic.** = “Licenciatura” – Degree in Biological Sciences

**Mast.** = Masters ‘ Degree

**MD** = Medical degree

**BD** = PhD students with a gran from FCT

**BI** = Research grant from either FCT or projects

**BTI** = Technical research grant from projects

### I.3. SUPPORT STAFF

(Common to the ECS and ICVS)

<b>Name</b>	<b>Qualification</b>	<b>Position (Rank)</b>	<b>Service</b>
Ana Cristina M. R. Taboada	Licenciatura	Técnico Superior	Laboratories
Lucília G. Ribeiro Pinto	Licenciatura	Técnico Superior	Laboratories
Magda João Castelhana Carlos	Licenciatura	Técnico Superior	Laboratories
Maria Paulina D. M. Santos	Licenciatura	Técnico Superior	Project Support Office
Luis Filipe F Oliveira Martins	Bachelor	Técnico	Laboratories
Domingos Ferreira Dias	Secondary Education	Técnico de Informática	Laboratories
Sónia Margarida R. da Cruz	Secondary Education	Assistente Administrativo	Post-Graduation
Susana Isabel Vaz Santos	Secondary Education	Auxiliar Técnico	Laboratories
João Filipe A. Malheiro	Basic Education	Auxiliar Técnico	Laboratories
Jorge Manuel S.G. Paula	Basic Education	Auxiliar Técnico	Laboratories
Maria Celina F. Barros	Basic Education	Auxiliar Técnico	Laboratories
Maria Manuela S. Carneiro	Basic Education	Auxiliar Técnico	Laboratories

## **APPENDIX II**

*Externally Funded Projects*

**List of the ongoing projects coordinated by ICVS members (PIs) that have been approved for external funding.**

This list includes the projects that have been approved both after the PIs' integration in the ICVS staff (A), and before their integration (B) (therefore, as members of their former research units).

**A) Atributed after PI integration in the ICVS**

1. "Mycobacteriosis of difficult treatment: Impact in public health"  
 Funding agency: Calouste Gulbenkian Foundation, *Programa de apoio à prevenção e rastreio de doenças infecciosas e oncológicas socialmente relevantes*  
 Funding for the ICVS team: 100.000 Euros  
 Host Institution: ICVS, University of Minho  
 Duration: 3 years (2002-2005)  
 PI: Jorge Pedrosa
  
2. "Molecules and mechanisms involved in the recognition of molecular patterns of pathogenic microorganisms: Implications for the susceptibility to relevant public health infections"  
 Funding agency: Calouste Gulbenkian Foundation, *Programa de apoio à prevenção e rastreio de doenças infecciosas e oncológicas socialmente relevantes*  
 Funding for the ICVS team: 170.000 Euros  
 Host Institution: ICVS, University of Minho  
 Duration: 3 years (2003-2006)  
 ICVS PI: Cecília Leão
  
3. "Paragens de fermentações alcoólicas – causas múltiplas e soluções integradas"  
 Funding agency: "Agência de Inovação/FCT"  
 Funding for the ICVS team: 74.184 Euros  
 Host Institution: Biology Centre, University of Minho  
 Duration: 3 years (2003-2006)  
 ICVS PI: Cecília Leão
  
4. "Biotechnological strategies to treat infectious diseases: intracellular targeting of antibiotics and oligonucleotides using liposomes"  
 Funding agency: "Agência de Inovação/FCT"  
 Funding for the ICVS team: 105.000 Euros  
 Host Institution: Bluepharma  
 Duration: 1.5 years (2004-2006)  
 ICVS PI: Jorge Pedrosa

5. "New aspects on coordinating limb bud development"
  - Funding agency: FCT
  - Funding for the ICVS team: 85.215 Euros
  - Host Institution: ICVS, University of Minho
  - Duration: 3 years (2003-2006)
  - ICVS PI: Isabel Palmeirim
6. "Cognitive Modulation of Pain: interaction between the limbic system and the supraspinal pain control system"
  - Funding agency: FCT
  - Funding for the ICVS team: 90.000 Euros
  - Host Institution: ICVS, University of Minho
  - Duration: 3 years (2003-2006)
  - ICVS PI: Armando Almeida
7. "Cellular and molecular studies in the pathogenic fungi *Paracoccidioides brasiliensis*: Dimorphism and its regulation by steroid hormones"
  - Funding agency: FCT
  - Funding for the ICVS team: 61.980 Euros
  - Host Institution: ICVS, University of Minho
  - Duration: 3 years (2003-2006)
  - ICVS PI: Fernando Rodrigues
8. "Involvement of sphingolipid signalling in chronological life-span and cell death in *Saccharomyces cerevisiae* - role of Isc1p sphingomyelinase"
  - Funding agency: FCT
  - Funding for the ICVS team: 13.400 Euros
  - Host Institution: Institute for Molecular and Cell Biology, University of Porto
  - Duration: 3 years (2003-2006)
  - ICVS PI: Paula Ludovico
9. "Study of Molecular Predictive Factors of Chemotherapy Response in High-Grade Astrocytic Tumours"
  - Funding agency: Schering-Plough Farma, Lda
  - Funding for the ICVS team: 10.000 Euros
  - Host Institution: ICVS, University of Minho
  - Duration: 2 years (2004-2005)
  - ICVS PI: Rui M Reis
10. "Aged and healthy brain: a multidisciplinary neurobiological approach to the aging brain"
  - Funding agency: Calouste Gulbenkian Foundation
  - Funding for the ICVS team: 105.500 Euros
  - Host Institution: ICVS, University of Minho
  - Duration: 3 years (2005-2008)
  - ICVS PI: Nuno Sousa



11. "Identification of changes in the protein expression of Brainstem, Hippocampal and Amygdala and in associated emotional behavior induced by different periods of Chronic Neuropathic Pain along ageing"  
Funding agency: Calouste Gulbenkian Foundation  
Funding for the ICVS team: 48.615 Euros  
Host Institution: ICVS, University of Minho  
Duration: 2 years (2005-2007)  
ICVS PI: Armando Almeida
12. "A multidisciplinary study of invasive fungal infections in immunosuppressed patients: Host susceptibility to fungi versus fungi resistance to drugs"  
Funding agency: FCT  
Funding for the ICVS team: 44.445 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Fernando Rodrigues
13. "Apoptotic pathway(s) in *Saccharomyces cerevisiae*: proteomic profile and metacaspase-interactive molecules"  
Funding agency: FCT  
Funding for the ICVS team: 69.500 Euros  
Host Institution: ICVS, Minho University  
Duration: 3 years (2005-2008)  
ICVS PI: Paula Ludovico
14. "The role of choroid plexus proteins in brain inflammation"  
Funding agency: FCT  
Funding for the ICVS team: 74.223 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Joana Almeida Palha
15. "Characterization of the iodine status of Portuguese women in fertile age and its relation with the psychomotor performance of the newborn"  
Funding agency: FCT  
Funding for the ICVS team: 59.989 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Joana Almeida Palha
16. "Vitamins and hormones: linking environment and genes in psychiatric disorders?"  
Funding agency: FCT  
Funding for the ICVS team: 100.000 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Joana Almeida Palha

17. "Study of the role of molecular chaperones and of the ubiquitin-proteasome system in Machado-Joseph disease"  
Funding agency: FCT  
Funding for the ICVS team: 77.900 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Patrícia Maciel
18. "Identification of molecular interactions in the chick "segmentation clock" using the yeast One-hybrid and two hybrid approaches"  
Funding agency: FCT  
Funding for the ICVS team: 90.000 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Isabel Palmeirim
19. "Mechanisms of Fetal Lung Development and Novel Therapeutic Approaches in Congenital Diaphragmatic Hernia"  
Funding agency: FCT  
Funding for the ICVS team: 80.150 Euros  
Host Institution: ICVS, University of Minho  
Duration: 3 years (2005-2008)  
ICVS PI: Jorge Correia-Pinto
20. "Integrating signals in embryogenesis: the case of somitogenesis in the chick"  
Funding agency: FCT  
Funding for the ICVS team: 14.850 Euros  
Host Institution: Sciences Faculty Foundation, Classic University of Lisbon  
Duration: 3 years (2005-2008)  
ICVS PI: Isabel Palmeirim
21. "Strategies to improve the therapeutic effect of anti-mycobacterial drugs"  
Funding agency: FCT  
Funding for the ICVS team: 20.876 Euros  
Host Institution: INETI  
Duration: 3 years (2005-2008)  
ICVS PI: Jorge Pedrosa
22. "P-cadherin in Breast Cancer: what regulates its aberrant expression and how it can induce invasion of neoplastic cells?"  
Funding agency: FCT  
Funding for the ICVS team: 9.999 Euros  
Host Institution: Institute for Molecular Pathology and Immunology, University of Porto  
Duration: 3 years (2005-2008)  
ICVS PI: Joana Paredes

23. "Glucocorticoid regulation of mood and cognition relevant neural substrates"  
Funding agency: CRUP  
Funding for the ICVS team: 4.500 Euros  
Host Institution: ICVS, University of Minho  
Duration: 2 years (2005-2006)  
ICVS PI: Nuno Sousa
24. "N-BNP na disfunção ventricular direita em Pediatria"  
Funding agency: Sociedade Portuguesa de Cardiologia  
Funding for the ICVS team: 10.000 Euros  
Host Institution: ICVS, University of Minho  
Duration: 2 years (2005-2007)  
ICVS PI: Jorge Correia-Pinto
25. "Papel do eixo Grelina-GH-IGFs no crescimento renal compensador após nefrectomia"  
Funding agency: Sociedade Portuguesa de Urologia  
Funding for the ICVS team: 8.000 Euros  
Host Institution: ICVS, University of Minho  
Duration: 2 years (2005-2007)  
ICVS PI: Jorge Correia-Pinto

**B) Atributed before PI integration in the ICVS**

1. "Searching for an essential function for transthyretin in the central nervous system"  
Funding agency: FCT  
Host Institution: Institute for Molecular and Cell Biology, University of Porto  
Duration: 2002-2005  
ICVS PI: Joana Palha
2. "Clinical, Epidemiologic and Genetic study of Rett syndrome in Portugal"  
Funding agency: FCT  
Host Institution: Institute for Molecular and Cell Biology, University of Porto  
Duration: 2003-2006  
ICVS PI: Patrícia Maciel
3. "Crystal structure determination of normal and expanded ataxin 3: Analysis of the structural determinants implicated in Machado-Joseph disease"  
Funding agency: FCT  
Host Institution: Institute for Molecular and Cell Biology, University of Porto  
Duration: 2003-2006  
ICVS PI: Patrícia Maciel

4. "The immune response to allografts: role of anti-inflammatory cytokines"

Funding agency: FCT

Host Institution: ICVS, University of Minho

Duration: 2003-2005

ICVS PI: Gil Castro

5. "Molecular and cellular characterisation of segmentation in the chick embryo"

Funding agency: FCT

Host Institution: Gulbenkian Institute of Science

Duration: 2003-2006

ICVS PI: Isabel Palmeirim

## **APPENDIX III**

*List of Scientific Production*

*List of Research Prizes*

*List of participations in Academic juries*

### III.1 Lists of the ICVS publications in 2005

(Note: In the lists below, the ICVS members are underlined)

#### III.1.1 International Publications

##### A. Papers

1. Andrade RP, Pascoal S, Palmeirim I. Thinking Clockwise. *Brain Res Rev*, 49:114-9 (2005).
2. Andrade RP, Kotter P, Entian K-D, Casal M. Multiple transcripts regulate *Saccharomyces cerevisiae* JEN1 mRNA glucose-triggered decay. *Biochem Biophys Res Commun*, 332:254-62 (2005).
3. Baptista MJ, Melo-Rocha G, Pedrosa C, Gonzaga S, Teles A, Estevao-Costa J, Areias JC, Flake AW, Leite-Moreira AF, Correia-Pinto J. Antenatal vitamin A administration attenuates lung hypoplasia by interfering with early instead of late determinants of lung underdevelopment in congenital diaphragmatic hernia. *J Pediatr Surg*, 40:658-665 (2005).
4. Baptista MJ, Correia-Pinto J, Melo-Rocha G, Guimaraes H, Areias JC. Brain-type natriuretic peptide in the diagnosis and management of persistent pulmonary hypertension of the newborn. *Pediatrics*, 115:1111-1112 (2005).
5. Baptista MJ, Recamán M, Melo-Rocha G, Nogueira-Silva C, Roriz J-M, Soares-Fernandes J, Gonzaga S, Santos M, Leite-Moreira A, Areias JC, Correia-Pinto J. Myocardium expression of Connexin 43, SERCA2a and myosin heavy chains isoforms are preserved in nitrofen-induced CDH rat model. *J Pediatr Surg*, in press.
6. Basto D, Trovisco V, Lopes JM, Martins A, Pardal F, Soares P, Reis RM. Mutation analysis of B-RAF gene in human gliomas. *Acta Neuropathologica*, 109:207-10 (2005).
7. Bessa JM, Oliveira M, Cerqueira JJ, Almeida OFX, Sousa N. Age-related qualitative shift in emotional behaviour: paradoxical findings after re-exposure of rats in the elevated-plus maze. *Behav Brain Res*, 162:135-142 (2005).
8. Camargo RS, Maeda MYS, Di Loreto C, Shirata NK, Anselmo Garcia E, Longatto Filho A. Is agNOR and DNA ploidy analysis useful for evaluating thyroid neoplasms? *Anal Quant Cytol Histol*, 27:157-161 (2005).
9. Camargo RS, Shirata NK, Setani EO, Garcia EA, Pompeu E, Martella E, di Loreto C, Longatto Filho A. DNA measurement after radiation-induced tissue structure of thyroid gland of rats. *J Bras Patol Med Lab*, 41:169-173 (2005).
10. Carvalho I, Milanezi F, Martins A, Reis RM, Schmitt F. PDGFR $\alpha$  overexpression in breast cancer is associated with tumour progression. *Breast Cancer Res*, 7:788-95 (2005).
11. Cerqueira JJ, Catania C, Sotiropoulos I, Schubert M, Kalisch R, Almeida OFX, Auer DP, Sousa N. Corticosteroid status influences the volume of the rat cingulate cortex - a magnetic resonance imaging study. *J Psych Res*, 39:451-460 (2005).
12. Cerqueira JJ, Pego JM, Taipa R, Bessa JM, Almeida OFX, Sousa N. Morphological correlates of corticosteroid-induced changes in prefrontal cortex-dependent behaviors. *J Neurosci*, 25:7792-7800 (2005).
13. Costa MJ. What Best College Teachers Do: Bain, Ken. *Biochem Mol Biol Educ*, 33: 238 (2005).

14. Crochemore C, Lu J, Wu Y, Liposits Zs, Sousa N, Holsboer F, Almeida OFX. Direct targeting of hippocampal neurons for apoptosis by glucocorticoids is reversible by mineralocorticoid receptor activation. *Mol Psych*, 10:790:798 (2005).
15. Costa MC, Costa C, Silva AP, Evangelista P, Santos L, Ferro A, Sequeiros J, Maciel P. Nonsense mutation in TITF1 in a Portuguese family with benign hereditary chorea. *Neurogenetics*, 6:209-215 (2005).
16. Costa MC, Magalhães P, Guimarães L, Maciel P, Sequeiros J, Sousa A. The CAG repeat at the Huntington disease gene in the Portuguese population: insights to its dynamics and to the origin of mutation. *Journal of Human Genetics*, 2005 Dec 22; [Epub ahead of print].
17. Costa S, Pinto D, Morais A, Vasconcelos A, Oliveira J, Lopes C, Medeiros R. Acetylation Genotype and the Genetic Susceptibility to Prostate Cancer in a Southern European Population. *Prostate*, 64:246-252 (2005).
18. Costa S, Medeiros R, Schmitt F. DNA signalling/repair genetic polymorphisms and breast cancer risk: a review. *Appl Cancer Res*, in press.
19. Dichtchekian V, De Braganca Pereira CA, Kuperman H, Della Manna T, Damiani D, Ferreira Alves VAF, Longatto Filho A, Setian N. Adrenocortical carcinoma: prognostic indices based on clinical and immunohistochemical markers. *J Pediatr Endocrinol Metab*, 18:347-53 (2005).
20. Dufloth R, Costa S, Schmitt FC, Zeferino LC. DNA repair gene polymorphisms and susceptibility to familial breast cancer in a group of patients from Campinas, Brazil. *Genet Mol Res*, in press.
21. Estêvão-Lima, Rolanda C, Pêgo J, Henriques-Coelho T, Silva D, Carvalho JL, Correia-Pinto J. Transvesical endoscopic peritoneoscopy: a novel 5 mm-port for intra-abdominal scarless surgery. *J Urol*, in press.
22. Freitas C, Rodrigues S, Saúde L, Palmeirim I. Running after the clock. *Int J Devel Biol*, 49:317-24 (2005).
23. Gales L, Cortes L, Almeida C, Melo C, Costa MC, Maciel P, Clarke DT, Damas AM, Macedo-Ribeiro S. Towards a structural understanding of the fibrillization pathway in Machado-Joseph 's disease: Trapping early oligomers of non-expanded ataxin-3. *J Mol Biol*, 353:642-54 (2005).
24. Gonçalves O, Fernandez Prieto M, Sampaio A, Pérez A; Henriques M; Reis-Lima M; Fuster M, Sousa N, Carracedo A. Cognitive Profile In Williams Syndrome: A Case Study. *Br J Devel Disabil*, 51:143-153 (2005).
25. Granja NM, Begnami MD, Bortolan J, Longatto Filho A, Schmitt FC. Desmoplastic small round cell tumour: Cytological and immunocytochemical features *CytoJournal*, 2:6 doi:10.1186/1742-6413-2-6 (2005).
26. Granja, NM, Sav R, Longatto Filho A, Alves VAF, Bedrossian C, Wiley E, Schmitt FC. Potential use of loss of heterozygosity in pleural effusions of breast cancer metastases using the microsatellite marker of the 16q22.1 region of the CDH1 Gene. *Analyt Quant Cytol Histol*, 27:61–66 (2005).
27. Henriques-Coelho T, Oliva-Teles N, Fonseca-Silva ML, Tibboel D, Guimaraes H, Correia-Pinto J. Congenital diaphragmatic hernia in a patient with tetrasomy 9p. *J Pediatr Surg*, 40:29-31 (2005).
28. Lima M, Costa MC, Montiel R, Ferro A, Santos C, Silva C, Bettencourt C, Sousa A, Sequeiros J, Coutinho P, Maciel P. Population genetics of wild-type CAG repeats in the Machado-Joseph disease gene in Portugal: no evidence of a mutational bias towards expansion. *Human Heredity*, 60:156-163 (2005).
29. Lima-Rodrigues M, Valle-Fernandes A, Nunes R, Almeida A. Distribution of neuromuscular junctions in laryngeal and syringeal muscles in vertebrates. *Anat Rec*, in press.
30. Longatto Filho A, Albergaria A, Paredes J, Moreira MA, Milanezi F, Schmitt FC. P-cadherin expression in glandular lesions of the uterine cervix detected by liquid-based cytology. *Cytopathology*, 16:88–93 (2005).

31. Longatto Filho A, Baltazar F, Bedrossian C, Wiley E, Schmitt FC. Distribution of VEGFR-3 immunohistochemical expression in mesothelioma. *Semin Diagn Pathol*, in press.
32. Longatto-Filho A, Maeda Mys, Erzen M, Branca M, Roteli-Martins C, Naud P, Naud P, Derchain SFM, Hammes Ls, Gontijo R, Sarian Lo, Matos J, Tatti S, Lima Tp, Syrjanen S, Syrjanen K. Conventional Pap smear and liquid-based cytology as screening tool in low-resource settings in Latin America. Experience from Latin America Screening Study. *Acta Cytol*, 49:500-6(2005).
33. Longatto Filho A, Martins A, Costa SMA, Schmitt FC. VEGFR-3 expression in breast cancer tissue is not restricted to lymphatic vessels. *Pathol Res & Pract*, 201:93–99 (2005).
34. Longatto Filho A, Miranda Pereira SMM, Di Loreto C, Utogawa ML, Makabe S, Sakamoto Maeda MYS, Marques JA, Santoro CL, Castelo A. DCS liquid-based system is more effective than conventional smears to diagnosis of cervical lesions: Study in high-risk population with biopsy-based confirmation. *Gynecol Oncol*, 97:497–500 (2005).
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38. Ludovico P, Madeo F, Silva MT. Yeast programmed cell death: an intricate puzzle. Critical Review on *IUBMB Life*, 57:129–135 (2005).
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42. Oliveira MS, Fraga AG, Torrado E, Castro AG, Pereira JP, Longatto-Filho A, Milanezi F, Schmitt FC, Meyers WM, Portaels F, Silva M T, Pedrosa J. Infection by *Mycobacterium ulcerans* induces persistent inflammatory responses in mice. *Infect Immun*, 733:6299-6310 (2005).
43. Palha JA, Goodman AB. Thyroid hormones and retinoids: a possible link between genes and environment in schizophrenia. *Brain Res Rev*, in press.
44. Paredes J, Albergaria A, Oliveira JT, Jerónimo C, Milanezi E, Schmitt FC. P-cadherin overexpression is an indicator of clinical outcome in invasive breast carcinomas and is associated with CDH3 promoter hypomethylation. *Clin Cancer Res*, 11:5869-5877 (2005).



45. Pinho T, Tavares P, Maciel P, Pollmann C. Developmental absence of maxillary upper incisors in the Portuguese population. *Eur J Orthod*, 27:443-9 (2005).
46. Reis RM, Martins M, Ribeiro SA, Basto D, Longatto-Filho A, Schmitt F, José M. Lopes. Molecular Characterization of PDGFR- $\alpha$ /PDGF-A and C-KIT/SCF in Gliosarcomas. *Cellular Oncology*, 27:319-26 (2005).
47. Reis RM, Reis-Filho JS, Longatto-Filho A, Tomarev S, Silva P, Lopes J.M. Differential Prox-1 and CD 31 expression in mucosae cutaneous and soft tissue vascular lesions and tumours. *Pathol Res & Pract*, 201:771-776 (2005).
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49. Reis-Filho JS, de Lander Schmitt FC. Fluorescence in situ hybridization, comparative genomic hybridization, and other molecular biology techniques in the analysis of effusions. *Diagn Cytopathol* 33:294-299, 2005.
50. Rodrigues S, Santos J, Palmeirim I. Molecular characterization of the rostral-most somites in early somitic stages of the chick embryo. *Mechanisms of Development*, in press.
51. Sambade C, Berglund M, Lagercrantz S, Sällström J, Reis RM, Enblad G, Glimelius B, Sundström C. U-2940: a human B-cell line derived from a diffuse large cell lymphoma sequential to Hodgkin lymphoma. *Int J Cancer*, 118:555-563, 2005.
52. Santos M, Bastos P, Gonzaga S, Roriz JM, Baptista MJ, Nogueira-Silva C, Melo-Rocha G, Henriques-Coelho T, Roncon-Albuquerque R, Leite-Moreira A, de Krijger R, Tibboel D, Rottier R, Correia-Pinto J. Ghrelin expression in human and rat fetal lungs and the effect of ghrelin administration in nitrofen induced congenital diaphragmatic hernia. *Pediatr Res*, in press.
53. Santos M, Coelho PA, Maciel P. Chromatin remodelling and neuronal function: exciting links. *Genes, Brain & Behav*, in press.
54. Sarian LO, Derchain SF, Naud P, Roteli-Martins C, Longatto Filho A, Tatti S, Branca M, Erzen M, Serpa-Hammes L, Matos J, Gontijo R, Braganca JF, Lima TP, Maeda MY, Lorincz A, Dores GB, Costa S, Syrjanen S, Syrjanen K. Evaluation of visual inspection with acetic acid (VIA), Lugol's iodine (VILI), cervical cytology and HPV testing as cervical screening tools in Latin America. This report refers to partial results from the LAMS (Latin American Screening) study. *J Med Screen*, 12:142-9 (2005).
55. Saúde L, Lourenço R, Gonçalves A, Palmeirim I. terra is a left-right asymmetry gene required for left-right synchronization of the segmentation clock. *Nature Cell Biol*, 7: 918-20 (2005).
56. Shi J, Shibayama A, Liu Q, Nguyen VQ, Maciel P, Sommer SS. Low Frequency of Heterozygous Deletion and Duplication in the MECP2 gene in Portuguese Patients with Rett Syndrome. *Human Mutation*, 25:505 (2005).
57. Silva RD, Sotoca R, Johansson B, Ludovico P, Sansonetty F, Silva MT, Peinado JM, Côrte-Real M. Hyperosmotic stress induces metacaspase- and mitochondria-dependent apoptosis in *Saccharomyces cerevisiae*. *Mol Microbiol*, 58:824-834 (2005).
58. Simpson PT, Reis-Filho JS, Gale T, Lakhani SR. Molecular evolution of breast cancer. *J Pathol*, 205:248-54, (2005).
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60. Sousa N, Almeida OFX, Wotjak C. A hitchiker's guide to laboratory rodent behavior. *Genes, Brain & Behav*, *in press*.
61. Stern CD, Charité J, Deschamps J, Duboule D, Durston AJ, Kmita M, Nicolas J-F, Palmeirim I, Smith JC, Wolpert L. Head-tail patterning of the vertebrate embryo: one, two or many unresolved problems? *Int J Devel Biol*, *in press*.
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63. Valdigem GL, Pereira T, Macedo C, Duarte ML, Oliveira P, Ludovico P, Sousa-Basto A, Leão C, Rodrigues F. A 20 Years Survey of Dermatophytoses in Braga-Portugal. *Int J Dermatol*, *in press*.

## **B. Book Chapters**

1. Almeida OFX, Condé GI, Sousa N. Oestrogen Regulation Of Sexual Behaviour, Mood And Cognition. In: "*Encyclopedia Of Life Sciences*", Article 101. Nature Macmillan/Wiley, *in press*.
2. Alves VAF, Longatto Filho A. Citologia: Interpretações dos esfregaços, novas técnicas e perspectivas. In: "*Patologia do trato genital inferior*" (Martins NV, Ribalta JCL, eds). ROCA, São Paulo, pp 435-464 (2005).
3. Dores GB, Longatto Filho A. Captura Híbrida. In: "*Patologia do trato genital inferior*" (Martins NV, Ribalta JCL, eds). ROCA, São Paulo, pp 603-620 (2005).
4. Lu J, Némethy Z, Pêgo JM, Cerqueira JJ, Sousa N, Almeida OFX. Cellular and Molecular Analysis of Stress-Induced Neurodegeneration – Methodological Considerations. In "*Handbook of Stress and the Brain*", Vol.15 Chapter 5.6, (Steckler T, Kalin NH, Reul JM, eds), (2005).
5. Pedrosa J, Aboim Horta A, González-Méijome JM – Fundamentos sobre microbiología da infecção e defesas imunológicas aplicados à adaptação de lentes de contacto. In: "*Contactologia*" (González-Méijome JM, ed), Capítulo 8. Unidixital, Santiago de Compostela, pp 142-158 (2005).
6. Pertovaara A, Almeida A. Endogenous Pain Modulation – Inhibitory Systems. In "*Handbook of Clinical Neurology – Pain*", Vol. 81, 3<sup>rd</sup> series, Vol. 3 (Cervero F, Jensen TS, eds). Elsevier, *in press*.
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8. Temudo T, Maciel P. Rett syndrome: Clinical features and advances in Genetics (Spanish). In "*Autismo Infantil*" (Mulas F, ed). Viguera Editores, S.L., Barcelona. (2005).

## **C. Patent**

1. Carvalho, A. and Rodrigues F. "DNA fragments and primers for the detection and identification of *Candida* species of clinical relevance". National patent of invention number: 103277. Filing date 17.05.2005

## **D. Abstracts in Congresses**

1. Albergaria A, Paredes J, Oliveira J, Jerónimo C, Ricardo S, Leitão D, Milanezi F, Schmitt F. "Aberrant P-cadherin expression is an indicator of clinical outcome in invasive breast carcinomas and is associated with CDH3 promoter methylation status". *30<sup>th</sup> FEBS Congress and 9th IUBMB Conference*, Budapest, Hungary (2005).

2. Almeida AJ, Martins M, Carmona J, Restrepo A, Cano L, Leão C, Rodrigues F. "New insights into the cell cycle profile of *Paracoccidioides brasiliensis*". *IX International Meeting on Paracoccidioidomycosis*, São Paulo, Brazil (2005).
3. Almeida AJ, Martins M, Carmona J, Restrepo A, Cano L, Leão C, Rodrigues F. "Paracoccidioides brasiliensis genome size and ploidy". *IX International Meeting on Paracoccidioidomycosis*, São Paulo, Brazil (2005).
4. Almeida B, Ohlmeier S and Ludovico P. (2005) "Insights on Acetic Acid- and Hydrogen Peroxide-induced apoptosis in *Saccharomyces cerevisiae*: A proteomic comparison". 4<sup>th</sup> IMYA -International Meeting on Yeast Apoptosis in Miami, USA (November, 2005).
5. Baptista MJ, Correia-Pinto J, Rocha G, Moreira J, Vaz T, Areias JC. N-BNP: "A potencial useful tool in the management of newborn with right ventricular obstruction". *Cardiology in the Young*. (2005).
6. Carvalho A, Almeida AJ, Osório N, Ludovico P, Pearce DA, Leão C, Rodrigues F. "Deletion of *BTN1*, the yeast orthologue of the gene responsible for juvenile NCL, leads to disruption of oxidative stress related pathway(s)". *10<sup>th</sup> International Congress on Neuronal Ceroid Lipofuscinoses*, Helsinki, Finland (2005).
7. Carvalho B, Reis RM, Mons T, Buffart T, Hopmans E, Moutinho C, Carneiro F, Ylstra B, Meijer G.A. "Microarray-CGH analysis of diffuse and intestinal components of mixed gastric carcinomas". *International Society for Cellular Oncology (ISCO)*, Belfast, UK. (Oral presentation) (2005).
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9. Carvalho I, Milanezi E, Martins A, Reis RM, Schmitt F. "Platelet-derived growth factor receptor alpha (PDGFR $\alpha$ ) expression in invasive breast carcinomas". *20<sup>th</sup> European Congress of Pathology*, Paris, France (2005).
10. Castro M, Lemos C, Barros J, Fraga C, Guimarães L, Maciel P, Sousa A, Sequeiros J, Pereira-Monteiro J, Silveira I. A mutation in the *ATP1A2* gene in a large family with migraine without aura. *Am J Hum Genet*, 75, suppl: 2089 (2004).
11. Costa B, Carvalho B, Ylstra B, Reis RM. "Application of different microarray platforms to the identification of genetic signature profiles in high-grade gliomas – advantages for tumours classification and prediction of therapy responses". *ESF Training Course: Microarray Gene Expression Analysis: Power and Potential of Standardisation*, Trondheim, Norway (2005).
12. Costa MC, Gomes-da-Silva J, Miranda CJ, Sequeiros J, Santos MM, Maciel P. "Study of the mouse homologue of the Machado–Joseph disease (MJD) gene". *FENS/HERTIE WINTER SCHOOL - "Neurodegenerative Aggregation Disorders: From Genes to Protein Aggregation, Neuronal Dysfunction and Experimental Treatments"*, Kitzbühl, Austria, (2005).
13. Costa MJ, and Pinto-Machado J. O modelo de aprendizagem por módulos de objetivos do Curso de Licenciatura em Medicina da Universidade do Minho". *VIII Congresso Luso-Galaico Português de Psico-Pedagogia*, 142 (2005).
14. Costa MJ, Salgueira A, Andrade RP, Oliveira P, Pinto-Machado J. A "Course to introduce freshman to an innovative medical curriculum". *Annual Meeting of the Association for Medical Education in Europe*, Amsterdam, The Netherlands, 142-143.

15. Costa S, Pinto D, Pereira D, Rodrigues H, Carvalho S, Portela C, Medeiros R, Schmitt F: "Importance of XRCC1 Arg399Gln polymorphism in the development of breast carcinoma in women with and without breast cancer family history". *ECCO 13*, Paris, France (2005).
16. Gaspar MM, Penha AF, Sousa AC, Eleutério CV, Domingues SA, Cruz A, Pedrosa J, Cruz MEM. "Rifabutin liposomes as a tool for improving treatment of *M. tuberculosis*". *Proceedings 7<sup>th</sup> International Conference: Liposomes Advances, Progress in Drug and Vaccine Delivery*, London, England (2005).
17. Gomes A, Brito MJ, Milanezi F, Schmitt F, Reis RM. "c-kit mutations analysis of Portuguese GISTs tumors". *20<sup>th</sup> European Congress of Pathology*, Paris, France (2005).
18. Henriques-Coelho T, Correia-Pinto J, Roncon-Albuquerque R Jr, Beleza-Meireles A, Lourenço AP, Teles A, Leite-Moreira AF. "Ghrelin improves biventricular function and attenuates autocrine/paracrine activation in monocrotaline-induced pulmonary hypertension". *Journal of the American College of Cardiology*, 45 (Supl. A):173-174A (2005).
19. Henriques-Coelho T, Roncon-Albuquerque R Jr, Lourenço AP, Teles A, Oliveira SM, Brandão-Nogueira A, Correia-Pinto J, Leite-Moreira AF. Administration of ghrelin modulates its myocardial expression and attenuates neurohumoral activation in MCT-induced pulmonary hypertension. *European Heart Journal* 2005;4 (Suppl. 1):176 (2005).
20. Laço M, Maciel P, Oliveira CR, Paulson HL, Rego AC. "Expression of expanded ataxin-3 sensitizes cells to NP-3 inhibition". *FENS Summer School – Neuron-glia interaction in aging and disease*, Ofir, Portugal (2005).
21. Longatto-Filho A, Martins A, Tomarev S, Reis RM, Costa S, Milanezi F, Schmitt FC. "Prox-1, a lymphatic-endothelium associated transcription factor, is overexpressed by breast cancer cells". *20<sup>th</sup> European Congress of Pathology*, Paris, France (2005).
22. Longatto Filho A, Pereira SMM, Makabe S, Utagawa M, Di Loreto C, Maeda MYS, Marques JA, Santoro CLF, Castelo A. "The performance of hybrid capture versus liquid-based cytology test in high risk population". *31<sup>st</sup> European Congress of Cytology*, Paris, France (2005).
23. Ludovico P, Rodrigues F, Leão C. "Mitochondrial role in human disorders: exploitation of *Saccharomyces cerevisiae* as a model". *23<sup>rd</sup> Small Meeting on Yeast Transport and Energetics (SMYTE)*, New Delhi, Índia (2005).
24. Macedo FYB, Mota JMSc, Almeida PRC, Baltazar F, Schmitt FC, Ferreira FV e Ribeiro RA. "Expressão de COX-2 e papel dos inibidores de COX na cistite hemorrágica induzida por ifosfamida e seu metabolito acroleína". *XX Reunião Anual da FeSBE*, São Paulo, Brasil (2005).
25. Maciel P, Santos M, Barbot C, Medeira A, Cabral H, Cabral P, Carrilho I, Gaspar I, Lobo-Antunes N, Moreira A, Temudo T. "Rett syndrome-like male patients: study of the MECP2, NLGN3 and NLGN4 genes" (Oral communication). *2<sup>nd</sup> Iberic Meeting of Pediatric Neurology*, Estoril, Portugal (2005).
26. Mattosinho de Castro Ferraz MG, Utagawa ML, Pitolli JE, Silva LS, Castelo A, Palácios R, Longatto Filho A. Associação da alta carga viral de HPV com resultado citológico alterado em mulheres grávidas e HIV-positivas. *VI Encontro do Instituto Adolfo Lutz*, São Paulo, Brazil, (2005).
27. Mota JMSc, Macedo FYB, Ferreira FV, Ribeiro RA, Almeida PRC, Schmitt FC, Baltazar F. "Expressão de COX-2 e papel dos inibidores de COX na cistite hemorrágica (CH) induzida por ifosfamida (IFS) e seu metabolito acroleína (ACR)". *Congresso Cearense de Cancerologia*, Fortaleza, Brazil (2005).

28. Namiyama GM, Utagawa ML, Shirata NK, Pereira SMM, Nonogaki S, di Loreto C, Maeda MYS, Kanamura CT, Mattosinho de Castro Ferraz MG, Alves VAF, Roteli-Martins C, Longatto Filho A, Syrjanen K. "Relationship between smoking patients and protein p1<sup>6</sup> and Ki-67 in liquid-based cytology". *IV São Paulo Research Conference Câncer today from molecular biology to treatment*, São Paulo, Brazil, (2005).
29. Osorio L, Afonso ND, Wolff A, Morgand C, Palmeirim I, Catala M. "BMP and WNT Signaling in the caudal part of the avian neural tube". *Annual meeting 2005 Societe Francaise de Biologie du Developpement*, Obernai, France (2005).
30. Osório N, Almeida B, Olhmeier S, Rodrigues F, Ludovico P. "Approaching *Saccharomyces cerevisiae* active cell death pathways". *4th International Meeting on Yeast Apoptosis Miami*, USA (2005).
31. Palha JA, Torrão L, Cerqueira J, Tavares H, Goncalves L, Almeida A, Correia-Pinto J, Sousa N, Salgueira A, Costa MJ. "External challenging of the muscle-skeletal system: a collaborative learning experience for first year medical students". *Annual Meeting of the Association for Medical Education in Europe*, Amsterdam, The Netherlands, 160 (2005).
32. Pedrosa J. "Inflammatory and immune responses to the infection by *M. ulcerans*: Insights from experimental infections. Improving case management and control of tuberculosis and Buruli Ulcer in Africa". *International Colloquium*, Cotonou, Benin, 75 (2005).
33. Pinto-Machado J, Candeias O, Cerqueira-Gomes M, Cunha D, Cotter J, Rua A, Sousa N, Freitas A, Costa MJ. "Assessing student learning and professional development in clinical Residencies: a proposal. *Annual Meeting of the Association for Medical Education in Europe*, Amsterdam, The Netherlands, 82 (2005).
34. Pinto-Machado J, Sousa N, Freitas A, Costa MJ. "Multicentric clinical residencies: a model". Annual Meeting of the Association for Medical Education in Europe, Amsterdam, The Netherlands, 236 (2005).
35. Reis RM, Carvalho B, Amorim J, Ribeiro SA, Pardal F, Almeida R, Ylstra B. "Microarray-based comparative genomic hybridisation analysis of astrocytic tumours occurring in a Li-Fraumeni like syndrome family". *2<sup>nd</sup> Quadrennial Meeting of World Federation of NeuroOncology*, Edinburgh, Scotland (2005).
36. Reis RM, Carvalho B, Mons T, Buffart T, Hopmans E, Moutinho C, Carneiro F, Ylstra B, Meijer GA. "Microarray-CGH analysis of diffuse and intestinal components of mixed gastric carcinomas". *Fragilome Meeting*, Heidelberg, Germany (2005).
37. Reis RM, Martins A, Ribeiro SA, Basto D, Longatto-Filho A, Schmitt F, José M. Lopes. "Molecular characterization of PDGF subfamily of receptor tyrosine kinases pathway in gliosarcomas". *2<sup>nd</sup> Quadrennial Meeting of World Federation of NeuroOncology*, Edinburgh, Scotland (2005).
38. Reis-Filho JS, Reis RM, Longatto Filho A, Tomarev S, Silva P, Lopes JM. "Differential Prox-1 and CD 31 expression in mucousae cutaneous and soft tissue vascular lesions and tumours". *20<sup>th</sup> European Congress of Pathology*, Paris, France (2005).
39. Rolanda C, Moreira MJ, Gonçalves R, Barata J, Marcelino M, Macedo G. "Gastroesophageal acute thermal lesion". *Canadian Journal of Gastroenterology*, in press.
40. Santos M, Sampaio P, Correia A, Pedrosa J, Pais C. "Interaction between macrophages and *Candida albicans* isolates from recurrent infections". *XXIV International Specialized Symposium on Yeasts*, Castellón, Spain (2005).
41. Santos M, Silva-Fernandes A, Oliveira P, Sousa N, Maciel P. "Delayed achievement of developmental milestones in a mouse model of Rett syndrome" (Oral communication), *Society for Neuroscience*, Washington DC, USA (2005).

42. Santos M, Silva-Fernandes A, Oliveira P, Sousa N, Maciel P. "Study of postnatal neurodevelopmental hallmarks in a mouse model of Rett syndrome" (Oral communication). *2<sup>nd</sup> Iberic Meeting of Pediatric Neurology*, Estoril, Portugal (2005).
43. Saúde L, Lourenço R, Gonçalves A, Palmeirim I. "*terra* is a left-right asymmetry gene required for left-right synchronization of the segmentation clock". *64<sup>th</sup> Annual Meeting of the Society for Developmental Biology*, San Francisco, USA (2005).
44. Silva R, Bessa J, Tavares H, Palha J, Almeida OFX, Sousa N. "Antidepressant actions of lithium involve restitution of basal rates of hippocampal granule cell turnover in an animal model of depression". *Society Neurosci Abstr*, 35: 793.3, Washington, DC, USA (2005).
45. Teixeira-Castro A, Sousa JC, Costa MJ, Pinto do Ó P, Maciel P "Using *Caenorhabditis elegans* as a model for learning the biochemical basis of axon guidance". *15<sup>th</sup> International C. elegans Conference*, University of California, Los Angeles, California, USA, 1332B (2005).
46. Utagawa ML, Longatto Filho A, Shirata NK, Mattosinho de Castro Ferazz MG, di Loreto C. "Estratégias de controle de qualidade em diagnóstico citopatológico em laboratório de referência – Estudo preliminar". *VI Encontro do Instituto Adolfo Lutz*, São Paulo, Brazil, (2005).

### III.1.2 National Publications

#### A. Papers

1. Lima-Rodrigues M, Valle-Fernandes A, Pinheiro J, Nunes R, Almeida A. A laringite neurogénica e as fibras sensitivas. *Rev. Port. ORL.*, 43:143-149 (2005).
2. Soares-Fernandes J, Maré R, Cerqueira JJ, Abreu I, Ribeiro M, Rocha J, Lourenço E. "Encefalite paraneoplásica do tronco cerebral associada a anticorpos anti-Hu". *Sinapse*, 5:23-26 (2005).

#### B. Book Chapters

1. Matias A, Correia-Pinto J, Ramalho C. Hérnia Diafragmática Congénita. In: "*Protocolos de Medicina Materno-Fetal*" (Ayres-de-Campos D and Montenegro N, eds) (2005).
2. Morgado JC, Carvalho AA, Costa MJ, Flores MA. "Formação docente em contexto universitário: um estudo em curso na Universidade do Minho". In: *Actas do VIII Congresso Galaico-Português de Psicopedagogia* (Silva BD and Almeida LS, coords), Braga, CIEd, pp. 2045-2056, ISBN 972-8746-36-9 (2005).
3. Palmeirim I, and Manaia A. Translation of the Book "*Quimeras, clones e genes*" from Nicole Le Douarin, Fundação Calouste Gulbenkian (2005).

#### C. Abstracts published in Journal Supplements

1. Baptista MJ, Correia-Pinto J, Rocha G, Moreira J, Vaz T, Areias JC. N-BNP na abordagem do RN com obstrução ventricular direita. *Rev Port Cardiol*. 2005; 24(Supl I):12 (2005).
2. Baptista MJ, Nogueira-Silva C, Santos M, Soares-Fernandes J, Roriz JM, Bastos P, Correia-Pinto J. Expressão miocárdica fetal de BNP no modelo experimental de HDC. *Rev Port Cardiol*. 2005; 24(Supl I):13.

3. Baptista MJ, Rocha G, Clemente F, Guimarães H, Correia-Pinto J. O N-BNP tem valor prognóstico e é predictivo de mortalidade em RN com HDC. *Rev Port Cardiol*. 2005; 24(Supl I):32.
4. Costa Dias V, Moreira MJ, Rolanda C, Gonçalves R, Barata J, Marcelino M. Hemorragia digestiva alta como primeira manifestação de amiloidose. *J Port Gastroenterol* 2005; 12 (Supl.): 43.
5. Gaspar MM, Penha AF, Sousa AC, Eleutério CV, Domingues SA, Cruz A, Pedrosa J, Cruz MEM. In vivo fate of rifabutin liposomal formulations for treatment of *M. tuberculosis* infections. *2<sup>nd</sup> Congress of the Portuguese Society of Pharmaceutical Sciences / 6<sup>th</sup> Congress of the Portuguese-Spanish Chapter of the Controlled Release*, Coimbra, Portugal, *Revista Portuguesa de Farmácia, Volume LII (n<sup>o</sup>2) Supp.: 11-12* (2005).
6. Henriques-Coelho T, Lourenço AP, Roncon-Albuquerque R Jr, Teles A, Oliveira SM, Brandão-Nogueira A, Carvalho FL, Correia-Pinto J, Leite-Moreira AF. A administração exógena de grelina aumenta a expressão ventricular esquerda de SERCA2A. *Rev Port Cardiol* 2005;24(Supl. I):I-171.
7. Henriques-Coelho T, Roncon-Albuquerque R Jr, Lourenço AP, Teles A, Correia-Pinto J, Leite-Moreira AF. Ansa de feedback entre grelina exógena, endógena e IGF-1 no modelo de hipertensão pulmonar induzida pela monocrotalina. *Rev Port Cardiol* 2005;24(Supl. I):I-91.
8. Recamón M, Baptista MJ, Melo-Rocha G, Ribeiro Castro, Correia-Pinto J. O padrão de expressão cardíaca de cadeias pesadas de miosina encontra-se preservado na HDC induzida experimentalmente. *Rev Port Cardiol*. 2005; 24(Supl I):108.
9. Rolanda C, Moreira MJ, Dias V, Gonçalves R, Barata J, Noronha R, Marcelino M. Fistuloscopia–instantâneo endoscópico. *J Port Gastroenterol* 2005; 12 (Supl.): 24.

Additionally, twenty-two communications (posters) in National Congresses were presented.

### **III.1.3 Conferences, Seminars and other Communications**

1. Almeida A. “Interacção entre o processamento Emocional e a Dor: papel da Amígdala”. Conference in the *IV Simposium de Perturbações Afectivas*, Braga (2005).
2. Almeida A. “Fisiopatologia da Dor”. Seminar at the *Pain Management Programme, Post-Graduation Courses for Health Professionals* organized by *Grünenthal Foundation*, Lisboa, Portugal (2005).
3. Almeida A. “Bases anátomo-fisiológicas para o desenvolvimento de dor crónica”. Conference at the *5<sup>a</sup> Reunião Internacional de Anestesia e Cuidados Intensivos*, Espinho, Portugal (2005).
4. Almeida A. “Porque é que as emoções controlam a dor?”. Seminar at the “*Semana de Portas Abertas à Ciência 2005*” Programme, University of Minho, Braga, Portugal (2005).
5. Almeida A. “Bases Anátomo-Fisiológicas da Dor”. Conference at the *Encontro Anual da Comissão de Pneumologia Oncológica – 2005*, Lousã, Portugal (2005).
6. Almeida A. “Como é que as emoções controlam a dor?”. Conference at the *XVII Encontro Nacional de Espondilíticos e seus Familiares*, University of Minho, Braga, Portugal (2005).
7. Andrade RP. “Métodos de análise de RNA”. Seminar at the *Applied Biology Degree*, University of Minho, Braga, Portugal (2005).

8. Baptista MJ. "Abordagem da paragem cardíaca na criança". Seminar at the *Curso Pós-graduado de Suporte de Vida Pediátrico*, Hospital S. João, Porto, Portugal (2005).
9. Baptista MJ. "Hérnia Diafragmática Congénita". Seminar at the *I Curso de Medicina Fetal*, Hospital S. João, Porto, Portugal.
10. Baptista MJ. "O N-BNP no RN com obstrução ventricular direita". Oral Communication in a *Post-Graduation session at the Pediatric Department, Hospital de S. João*, Porto, Portugal (2005).
11. Correia-Pinto J. "Formação pré-graduada em Pediatria na ECS da Universidade do Minho". Seminar at the *XXXI Jornadas de Pediatria*, Braga, Portugal (2005).
12. Correia-Pinto J. Chairman of a Conference session on Molecular Cardiology. *XXVI Congresso Português de Cardiologia*, Porto, Portugal (2005).
13. Correia-Pinto J. Chairman of the Conference 'Fetal Therapy: present and future' presented by Prof Alan W Flake at the *XXXI Jornadas de Pediatria*, Braga, Portugal (2005).
14. Correia-Pinto J. "Hérnia Diafragmática Congénita". Seminar at the *Ciclo de Estudos Especiais em Neonatologia do Hospital S João*, Porto, Portugal (2005).
15. Correia-Pinto J. "Palivizumab in infants with surgical pathologies". Conference at the *I International Meeting of Neonatology and XXXIII Journeys of the Neonatal Branch of the Portuguese Society of Pediatrics*, Vilamoura, Portugal (2005).
16. Costa MJ. "Active learning: is it possible?". Seminar at the *Workshop on Project Led Engineering Education*, Braga, Portugal (2005).
17. Costa MJ. "Teaching Biotechnology in highschool: what is missing?". Seminar at the *From DNA to Protein Workshop*, Porto, Portugal (2005).
18. Costa MJ. "OBL/PBL: que futuro?" Pannel member, *Tertúlias Científicas do Núcleo de Estudantes de Medicina da Faculdade de Ciências da Saúde da Universidade da Beira Interior*, Covilhã, Portugal (2005).
19. Ludovico P. Flow cytometric analysis of yeast cells. Seminar at the *1<sup>st</sup> Workshop on Advanced Light Microscopy and Flow Cytometry*, IBMC, Porto, Portugal (2005).
20. Ludovico, P. Apoptosis in yeast. Seminar at the *Neuroscience PhD Programme, Centro de Neurociências de Coimbra*, Coimbra, Portugal (2005).
21. Maciel, P. "Genetics of Machado-Joseph disease". Seminar at the *Neuroscience PhD Programme, Centro de Neurociências de Coimbra*, Coimbra, Portugal (2005).
22. Maciel P. "Genetics of Rett syndrome". Seminar at the *Programa de mestrado em Medicina Molecular e Oncobiologia*, Faculty of Medicine, University of Oporto, Porto, Portugal (2005).
23. Maciel P. "Genética of Rett syndrome". Seminar at the *Programa de Mestrado em Psiquiatria*, Faculty of Medicine, University of Oporto, Porto, Portugal (2005).
24. Palmeirim I. Teaching activities at the "Computational Biology Gulbenkian PHD Programme", Portugal (2005).
25. Pascoal S. "Como se constrói um embrião?". Seminar at the "*Semana de Portas Abertas à Ciência 2005*" Programme, University of Minho, Braga, Portugal (2005).
26. Pinto-Machado J. "O Curso de Medicina da Universidade do Minho". Seminar at the *Master in Medical Education*, Instituto de Ciências da Saúde da Universidade Católica Portuguesa (2005).



27. Pinto-Machado J. "Perspectiva Antropológica do Curso de Medicina da Escola de Ciências da Saúde da Universidade do Minho" Communication at the Congresso Internacional de Filosofia sobre "Pessoa e Sociedade. Perspectiva para o Século XXI", organized by *Faculdade de Filosofia da Universidade Católica Portuguesa* and *Revista Filosofia* (2005).
28. Pinto-Machado J. "Artigo 13: Solidariedade e Cooperação" Seminar at the *Workshop on Declaração Universal de Bioética e Direitos Humanos da UNESCO*, organized by *Serviço de Bioética da Faculdade de Medicina do Porto* and *Associação Portuguesa de Bioética* (2005)
29. Pinto-Machado J. "Formação Bioética em Ensino Superior". Seminar at the *Formação Bioética nas Profissões de Saúde*, Seminário Anual do Conselho Nacional de Ética para as Ciências da Vida (2005).
30. Pinto-Machado J. "Sofrimento, Mistério do Homem, Profissionais de Saúde". Conference at *I Congresso Nacional sobre Saúde e Comportamento*, organized by Psychology Department, University of Minho, Braga, Portugal (2005).
31. Nogueira-Silva C. "Gostar de ser médico de família: como se começa a gostar". Communication at the *10º Congresso de Medicina Familiar*, Covilhã, Portugal (2005).
32. Reis RM. "Biologia Molecular de Gliomas". Seminar at the *Master in Neurosciences* of Faculdade de Medicina da Universidade Clássica de Lisboa, Lisboa, Portugal (2005).
33. Reis RM. "Aplicação de "DNA Chips" no Estudo de Tumores Cerebrais". Seminar at the *Meeting of the Portuguese Neuro-oncology Association*, Espinho, Portugal (2005).
34. Rodrigues S. "Can the node initiate the segmentation programme?". Seminar at the *III PDIGC annual meeting*, Oeiras, Portugal (2005).
35. Rolanda C. 'Hipertensão Portal – da Fisiopatologia ao Tratamento'. Seminar at the *Reunião do Internato Médico do Hospital S. Marcos*, Braga, Portugal (2005).
36. Silva-Fernandes A, Costa MC, Ferreira T, Maciel P. "Somatic and intergenerational instability of expanded CAG repeat in a transgenic mouse model of Machado-Joseph disease". Seminar at the *IX Annual Meeting of the Portuguese Society of Human Genetics*, ProCura Portuguese Proteomics Network, Cascais, Portugal (2005).

Other seminars (10) were performed in the interface ECS / ICVS.

### III.2 2005 International Papers: number and Journal Impact Factors

JOURNAL	Impact Factor	n
<i>Nature Cell Biology</i>	20.65	1
<i>J Neuroscience</i>	7.91	1
<i>Development</i>	7.15	1
<i>Molecular Psychiatry</i>	6.94	1
<i>Human Mutation</i>	6.85	1
<i>Biological Psychiatry</i>	6.04	1
<i>Neurology</i>	5.97	1
<i>Molecular Microbiology</i>	5.96	1
<i>Clinical Cancer Research</i>	5.62	1
<i>J Molecular Biology</i>	5.54	1
<i>J Pathology</i>	5.33	1
<i>Brain Research Reviews</i>	4.62	2
<i>International J Cancer</i>	4.42	1
<i>Prostate</i>	4.33	1
<i>Infection Immunity</i>	4.03	1
<i>Pediatrics</i>	3.90	1
<i>Genes, Brain &amp; Behavior</i>	3.85	2
<i>J Urology</i>	3.71	1
<i>J Endocrinology</i>	3.32	1
<i>Mechanisms Development</i>	3.26	1
<i>Human Heredity</i>	3.18	1
<i>Anatomical Record</i>	3.15	1
<i>Neurogenetics</i>	3.12	1
<i>J Psychiatric Research</i>	3.08	1
<i>Behav Brain Research</i>	2.99	1
<i>Breast Cancer Res</i>	2.98	2
<i>Biochemical Biophysical Research Communications</i>	2.90	1
<i>Pediatric Res</i>	2.88	1
<i>Acta Neuropathologica</i>	2.50	1
<i>J Human Genetics</i>	2.32	1
<i>Gynecologic Oncology</i>	2.08	1
<i>J Medical Screening</i>	1.99	1

<i>International J Developmental Biology</i>	1.89	2
<i>IUBMB Life</i>	1.74	1
<i>International J Gynecol Pathol</i>	1.54	1
<i>Anticancer Research</i>	1.40	1
<i>J Pediatric Surgery</i>	1.25	3
<i>Cytopathology</i>	1.04	1
<i>Semin Diagn Pathology</i>	0.98	1
<i>Diagnostic Cytopathology</i>	0.96	1
<i>Analytical Quantitative Cytology Histology</i>	0.94	2
<i>J Pediatric Endocrinology &amp; Metabolism</i>	0.90	1
<i>Int J Dermatology</i>	0.88	1
<i>Acta Cytologica</i>	0.83	1
<i>Eur J Orthodontics</i>	0.79	1
<i>Pathology Research &amp; Practice</i>	0.68	2
<i>Biochem Mol Biol Education</i>	0.51	1
<i>Appl Cancer Research</i>		1
<i>Braz J Devel Disability</i>		1
<i>Cellular Oncology</i>		1
<i>Cytojournal</i>		1
<i>DST J bras Doenças Sex Transm</i>		1
<i>Genet Mol Res</i>		1
<i>J Bras Patol Med Lab</i>		1
<i>J Low Genit Tract Dis</i>		1
	<b>TOTAL</b>	<b>63</b>

n – number of papers published including those *in press* in 2005

Impact Factors of 2004, according to Journal Citation Reports

### III.3 Research Prizes

#### **Internal ICVS Prizes**

- Annual Prize to the ICVS Research Domain that published the paper in the International Journal with highest IF: “Development and Neoplasia Group”; Nature Cell Biology, IF= 20.65
- Annual Prize to the ICVS Research Domain with the highest Total IF per each PhD member: “Neurosciences Group”; Total IF=12.59

#### **External Prizes**

In 2005, the eleven prizes listed below were awarded to researchers of the ICVS.

1. “Prize Pfizer in Basic Research”, with the study “*terra is a left-right asymmetry gene required for left-right synchronization of the segmentation clock*”, by Saúde L., Lourenço R., Gonçalves A., Palmeirim I. *Nature Cell Biology*, 7: 918-20 (2005).
2. “2<sup>nd</sup> Prize Grunenthal – Pain 2005”, with the study “*Brain projections to the medullary dorsal reticular nucleus, with special emphasis on the endogenous pain control system: an anterograde and retrograde tracing study in the rat*”, by Leite-Almeida H, Valle-Fernandes A, Almeida A (2005).
3. “Prize for the best Portuguese paper published in 2004 in an international journal with referee” of the Portuguese Society of Pneumology/AstraZeneca with the study “*Endogenous production of ghrelin and beneficial effects of its exogenous administration in monocrotaline-induced hypertension*”, by Henriques-Coelho T, Correia-Pinto J, Roncon-Albuquerque Jr R, Baptista MJ, Lourenço AP, Oliveira SM, Nogueira AB, Teles A, Fortunato JM, Leite-Moreira A, published in *Am Journal of Physiology Heart Circ Physiol*. (2005).
4. “Prize for Best scientific work in Cellular and Molecular Biology”, with the study “*New insights into the cell cycle profile of Paracoccidioides brasiliensis*”, by Almeida AJ, Martins M, Carmona J, Restrepo A, Cano L, Leão C, Rodrigues F, presented at the *IX International Meeting on Paracoccidioidomycosis*, Águas de Lindóia, São Paulo Brasil (2005).
5. “Best Poster Award” with the study “*What is linking genes and environment in schizophrenia? A potential role for thyroid hormones*”, by Palha JA, Ruano D, Soares MJ, Valente J, Azevedo MH, Goodman AB, Hutz MH, Gama C, Lobato MI, Belmonte-de-Abreu P, Macedo A, presented at the *2nd International Colloquium of Schizophrenia of Oporto*, Porto, Portugal (2005).
6. “Best Poster”, with the work “*Análise de alterações genéticas preditivas da resposta à terapêutica dirigida ao alvo molecular EGFR em tumores de bexiga*”, by Fernandes RJ, Reis RM, Pinheiro C., Baltazar F, Sanches M, Santos LL, presented at *10º Congresso Nacional de Oncologia*, Porto, Portugal (2005).
7. “1<sup>st</sup> Prize for Best Oral Presentation” with the study “*O papel da grelina no desenvolvimento pré-natal do pulmão normal e hipoplásico: um novo alvo terapêutico no tratamento fetal da hérnia diafragmática congénita*”, by Santos M, Bastos P, Gonzaga S, Baptista MJ, Roriz JM, Silva C, Melo-Rocha G, Henriques-Coelho T, Leite-Moreira AF, Rottier R, Tibboel D, Correia-Pinto J, presented at the *III Congresso Ibérico de Cirurgia Pediátrica*, Madeira, Portugal (2005).

8. "First Prize" for the work "*O N-BNP sérico tem valor prognóstico e é predictivo de mortalidade em RN com HDC*" by Henriques-Coelho T, Baptista MJ, Rocha G, Clemente F, Vasconcelos G, Pinto H, Soares H, Centeno M, Areias JC, Correia Pinto J, presented at the *V Gala Internos Neonatologia*, Portugal (2005).
9. "Best Oral Communication in Laringology e Cirurgia Cervico-facial Surgery" with the work "*A capacidade vocal está relacionada com a distribuição das placas motoras nos músculos glóticos*", by Lima-Rodrigues M, Valle-Fernandes A, Pinheiro A, Nunes R, Almeida A, presented at the *52º Congresso Nacional da Sociedade Portuguesa de Otorrinolaringologia e Cirurgia Cervico-facial*, Vilamoura, Portugal (2005).
10. "Best Poster Communication", with the study "*Hyperosmotic stress induces an apoptotic programmed cell death process in Saccharomyces cerevisiae: Evidences of a caspase- and mitochondrial-dependent pathway*", by Silva, R.D., Sotoca, R., Johansson, B., Ludovico, P., Sansonetty, F., Silva, M.T., Peinado, J.M. and Côte-Real, M, presented at the *Meeting of the Iberian Cytometric Society*, Porto, Portugal (2005).
11. "2<sup>nd</sup> Prize" for the study '*Microinjecções in útero de vectores víricos e terapia genica pulmonar fetal*', by Henriques-Coelho T, Gonzaga S, Davey M, Endo M, Zoltick P, Hedrick H, Leite-Moreira AF, Flake AW, Correia-Pinto J, presented at the *V Gala Internos Neonatologia*, Portugal (2005).

#### **III.4 Participation in Academic Juries**

1. Castro G., Jury member (*opponent*) for the PhD Degree in Engineering Sciences of Maria Judite Tavares Moreira Novais Barbosa – "Inflammatory responses to biomaterials: interactions between leukocytes and self-assembled monolayers", Faculty of Engineering, University of Porto.
2. Castro G., Jury member for the Master Degree in Biology of Miriam Nunes Duarte – "Prevenção de parasitoses gastrintestinais de transmissão fecal-oral", Faculty of Sciences, University of Porto.
3. Costa MJ., Jury member for the Master Degree in Teaching of Biology of Jorge Rodriguez Lima – "Biotechnologia na Escola", Faculty of Sciences, University of Porto.
4. Leão C., Jury member (*external examiner*) for the PhD Thesis "Cloning and characterization of the malic enzyme gene from *Candida utilis*", Stellenbosch University, South Africa.
5. Leão C., Jury member for Associated Professor t in the Biomedical Sciences Group, area of Organic and Functional Systems/Biochemistry, Health Sciences School, University of Minho.
6. Leão C., Jury member for Associated Professor in the Pathology Group, area of Biopathology and Introduction to Therapeutics/Immunology, Health Sciences School, University of Minho.
7. Leão C., Jury member for Associated Professor in the Biomedical Sciences Group, area of Organic and Functional Systems/Clinical Anatomy, Health Sciences School, University of Minho.
8. Leão C., Jury member for Associated Professor in the Cellular Biology Group, Faculty of Sciences and Technology, New University of Lisbon.
9. Leão C., Jury member for Associated Professor in the area of Environmental Engineering, University of Trás-os-Montes e Alto Douro.
10. Leão C., Jury member for Associated Professors in the group of Biological Sciences, Faculty of Pharmacy, University of Porto.
11. Leão C., Jury member for Associated Professor in the area of Clinical Biochemistry, Autonomous Section of Health, Madeira University.

12. Leão C., Jury member for Full Professor in the area of Education, University of Trás-os-Montes e Alto Douro.
13. Leão C., Jury member (*opponent*) for Scientific Coordinator, Hygiene and Tropical Medicine Institute, New University of Lisbon.
14. Leão C., Jury member (*opponent*) for the PhD Degree in Sciences of Ana Sampaio. “Yeast communities associated with decomposing leaf litters in a mountain stream”, University of Trás-os Montes e Alto Douro.
15. Leão C., Jury member (*opponent*) for the PhD Degree in Sciences of Ana Paula Fernandes Monteiro Sampaio Carvalho, School of Sciences, University of Minho.
16. Leão C., Jury member (*opponent*) for the PhD Degree in Biomedical Sciences of Cristina Isabel Ramires Rigaud de Abreu, Institute of Biomedical Sciences *Abel Salazar*, University of Porto.
17. Leão C., Jury member (*opponent*) for the PhD Degree in Biotechnology of Joana Gabriela Laranjeira da Silva, Superior School of Biotechnology, Portuguese Catholic University.
18. Leão C., Jury member (*opponent*) for the PhD Degree in Biotechnology of Rita Maria Criner y Dintel Matias Vargas, Superior Technical Institute.
19. Ludovico P., Jury member (*opponent*) for the Master Degree in Molecular Genetics of Margarida Isabel de Barros Coelho Martins – “*Paracoccidioides brasiliensis*: development of molecular tools”, Sciences School, University of Minho.
20. Ludovico P., Jury member for the Master Degree in Molecular Genetics of Rodrigo Emanuel Gomes Leite de Oliveira – “Insights into the molecular basis of human mitochondrial diseases defective in cytochrome c oxidase activity”, Sciences School, University of Minho.
21. Palmeirim I., Jury member for the PhD Degree of Ana Sofia Cachaço “ $\beta$ 1 integrins in mouse (*Mus musculus*) skeletal muscle development”, Faculty of Sciences, University of Lisbon.
22. Palmeirim I., Jury member for the PhD Degree of Catarina Freitas “Control of the mediolateral specification of the presomitic mesoderm”, Faculty of Sciences, University of Lisbon.
23. Pedrosa J., Jury member (*opponent*) for the Master Degree in Biology of Miriam Nunes Duarte – “Prevenção de parasitoses gastrintestinais de transmissão fecal-oral”, Faculty of Sciences of Porto.
24. Pedrosa J., Jury member (*opponent*) for the Master Degree in Oncology of Patrícia Alexandra Azevedo Blanco Benevides - “Efeito da Mobilização com G-CSF nos Linfócitos e Células NK dos Enxertos Hematopoiéticos”, Abel Salazar Institute for Biomedical Sciences, University of Porto.
25. Pedrosa P., Jury member for the PhD Degree in Veterinary Sciences of Paula Cristina Gomes Pereira Proença - “Doença Hemorrágica do Coelho. Estudo Anatomoclínico da Infecção por Calicivírus”, Abel Salazar Institute for Biomedical Sciences, University of Porto.
26. Reis RM., Jury member (*opponent*) for the Master Degree in Molecular Microbiology of Maria João Coelho Machado – “Estrogénio e a via de transdução de sinal de TGFbeta na angiogénese”, University of Aveiro.
27. Rodrigues F., Jury member (*opponent*) for the Master Degree in Molecular Genetics of Rodrigo Emanuel Gomes Leite de Oliveira – “Insights into the molecular basis of human mitochondrial diseases defective in cytochrome c oxidase activity”, Sciences School, University of Minho.
28. Rodrigues F., Jury member for the Master Degree in Molecular Genetics of Margarida Isabel de Barros Coelho Martins – “*Paracoccidioides brasiliensis*: development of molecular tools”, Sciences School, University of Minho.

## **APPENDIX IV**

*PhD, Master and other Research Students:  
Thesis, Themes and Supervisors*

## IV.1 PhD and Master Students: Thesis, Themes and Supervisors

RESEARCH AREA	POSITION	STUDENT	SUPERVISOR(S)	THESIS THEME
<b>Infectious Diseases</b>	PhD (BD)	Almeida, Agostinho	Cecília Leão Fernando Rodrigues (ICVS)	Cellular and molecular analysis of the dimorphic fungi <i>Paracoccidioides brasiliensis</i>
	PhD (BD)	Almeida, Bruno	Paula Ludovico (ICVS) Tiago Outeiro (Harvard Medical School- USA)	Apoptotic pathway(s) in <i>Saccharomyces cerevisiae</i> : proteomic profile, metacaspase-interactive molecules and neurodegeneration
	PhD (BD)	Carvalho, Agostinho	Fernando Rodrigues Patricia Maciel (ICVS)	Susceptibility of immunosuppressed patients to invasive fungal infections: analysis of molecular factors
	PhD (BD)	Cruz, Andrea	Gil Castro (ICVS) Andrea Cooper (Trudeau Institute- USA)	Understanding BCG vaccination: implications for the design of new preventive strategies against mycobacteriosis
	MT (UP)	Duarte, Miriam Nunes	Gil Castro (ICVS)	Prevention of faecal-oral transmitted gastrointestinal parasitosis
	PhD (BD)	Fraga, Alexandra	Jorge Pedrosa (ICVS)	Understanding Buruli Ulcer: elucidation of the cellular and molecular mechanisms underlying infection with <i>Mycobacterium ulcerans</i>
	MT	Martins, Margarida	Fernando Rodrigues (ICVS)	<i>Paracoccidioides brasiliensis</i> . Development of molecular tools
	MT (BI)	Oliveira, Rodrigo	Paula Ludovico (ICVS)	Insights into the molecular basis of human mitochondrial diseases defective in cytochrome c oxidase activity
	PhD (BD)	Osório, Nuno	Fernando Rodrigues (ICVS) David Pearce (Univ. Rochester-USA)	Yeast models of neuronal ceroid lipofuscinosis: From different genes to common biological features
	PhD(BD)	Torrado, Egídio	Jorge Pedrosa (ICVS)	Characterization of cellular and molecular immune responses in experimental infection by mycobacteria
<b>Neurosciences</b> (cont.)	PhD	Bessa-Peixoto, João (MD)	Nuno Sousa (ICVS)	Interaction between anxiety and depression in animal models of behaviour: insights on neuroplasticity and cognitive function
	PhD	Cerqueira, João (MD)	Nuno Sousa (ICVS)	Structural reorganization of the prefrontal cortex by corticosteroids and CRH



PhD(BD)	Costa, M <sup>a</sup> do Carmo	Patrícia Maciel (ICVS) Jorge Sequeiros (ICBAS) Manuela Santos (Univ. Montreal-Canada)	Study of the homologue in <i>Mus musculus</i> of the Machado-Joseph disease gene
PhD	Costeira, Maria José (MD)	Joana Palha (ICVS) Susana Ares (Alberto Sols Institute, Madrid-Spain)	Maternal causes of transitory neonatal hypothyroidism: evaluation of pregnant women in the Minho region of Portugal
PhD	Cotter, Jorge (MD)	Nuno Sousa (ICVS) Jorge Polónia (UP)	Study of the relation between the evolution of hypertension, renal function and urinary excretion of proteins in the population of hypertension people
PhD	Fernandes, Anabela	Patrícia Maciel (ICVS)	Study of the pathogenic mechanism of Machado –Joseph disease in a transgenic mouse model
PhD(BD)	Gonçalves, Leonor	Armando Almeida (ICVS) Antti Pertovaara (Univ Helsinki-Finland)	The interaction between the limbic system and chronic neuropathic pain – the role of the amygdala
PhD	Lemos, Laurinda (MD)	Armando Almeida (ICVS) Teresa McIntyre (UM)	New therapies for the treatment of trigeminal neuralgia
MT	Lessa, Lira	Patrícia Maciel (ICVS)	Study of the homologue in <i>Gallus gallus</i> of the Machado-Joseph disease gene
PhD(BD)	Marques, Fernanda	Joana Palha (ICVS)	Searching for the function of transthyretin in the energy metabolism and of the choroid plexus in inflammation
PhD(BD)	Mesquita, Ana Raquel	Nuno Sousa (ICVS)	Assessing acute and long-term neurological sequelae of seizures on the “limbic” brain: the influence of early life stress and hyperthermia
PhD	Oliveira, Mário (MD)	Nuno Sousa (ICVS)	Neurodevelopmental implications of late gestation short-term corticotherapy
PhD	Pêgo, José Miguel (MD)	Nuno Sousa (ICVS)	Influence of stress upon the structure and function of the amygdala
MT	Pereira, M <sup>a</sup> José (MD)	Nuno Sousa (ICVS)	Ansiolitic effect of propofol in non-sedative doses
PhD	Pinto-Ribeiro, Filipa	Armando Almeida (ICVS) Nuno Sousa (ICVS)	Anatomical and functional basis for the interaction between stress and chronic (neuropathic) pain

**Development &  
Neoplasia**

PhD	Rodrigues, Manuel Lima (MD)	Armando Almeida (ICVS) Rui Nunes (UP)	Sensorimotor innervation of the rat larynx
PhD(BD)	Rodrigues, Ana João	Patrícia Maciel (ICVS)	Cellular and physiological changes associated with absence of Josephin: study in <i>C. elegans</i>
PhD(BD)	Ruano, Dina	Joana Palha (ICVS) Patrícia Maciel (ICVS)	Genetics of schizophrenia: the retinoid and thyroid hormone hypothesis
PhD(BD) (UP)	Santos, Mónica	Patrícia Maciel (ICVS)	Study of the pathogenesis of Rett Syndrome and the role of protein MeCP2 in neuronal function
PhD(BD)	Silva, Rui	Nuno Sousa (ICVS)	Interventions modulating hippocampal postnatal neurogenesis: structural and functional implications
PhD(BD)	Albergaria, André	Fernando Schmitt (IPATIMUP / ICVS)	Estudo das vias moleculares de regulação do gene p63: sua função na diferenciação e carcinogénese das células basais/mioepiteliais da glândula mamária
MT	Alonso, Isis	Fátima Baltazar (ICVS) Fernando Schmitt (IPATIMUP / ICVS)	Evaluation of the effect of somatostatin analogs in the inhibition of angiogenesis
PhD	Baptista, Maria João (MD)	Jorge Correia-Pinto (UM) J. Carlos Areias (UP)	Cardiopulmonar physiopathology and fetal prognostic factors in congenital diaphragmatic hernia
MT	Basto, Diana	Rui M. Reis (ICVS)	Molecular characterization of EGFRvIII and B-RAF oncogenes in Gliomas
MT	Carvalho, Inês	Fernando Schmitt (IPATIMUP / ICVS)	PDGFR in breast cancer
PhD(BD)	Costa, Bruno	Rui M. Reis (ICVS)	Study of molecular predictive factors of therapy response and novel therapeutic targets in human gliomas
PhD(BD)	Costa, Sandra	Fernando Schmitt (IPATIMUP / ICVS)	DNA repair gene polymorphisms in a group of breast cancer patients from portuguese origin
PhD	Duarte, Fátima (MD)	Fernando Schmitt (IPATIMUP / ICVS) Igor Prudovsky (Maine Medical Inst-USA)	Role of FGF in angiogenesis
PhD	Estêvão-Lima (MD)	Jorge Correia-Pinto (ICVS) José la Fuente (UP)	Development of novel techniques for intra-abdominal scarless surgery

<b>Development &amp; Neoplasia</b> (cont.)	PhD(BD)	Gonzaga, Sílvia	Jorge Correia-Pinto (ICVS) Alan W Flake (U. Pennsylvania-USA)	Fetal lung development and new therapeutical approaches in congenital diaphragmatic hernia
	PhD (FMUP-UP)	Henriques-Coelho, Tiago (MD)	Adelino Leite-Moreira (UP) Jorge Correia-Pinto (ICVS)	Cellular and neurohumoral regulation of pulmonary growth and hypertension: Pathophysiological implications
	PhD(BD)	Pascoal, Susana	Isabel Palmeirim (ICVS)	New Aspects of the Coordination of Vertebrate Limb Bud Development
	PhD (ICBAS-UP)	Reis, Joaquim (MD)	Jorge Correia-Pinto (ICVS)	Fetal pathophysiology of experimental myelomeningocele
	PhD(BD)	Reis-Filho, Jorge (MD)	Fernando Schmitt (IPATIMUP / ICVS)	Myoepithelial differentiation in breast carcinomas: pathological recognition and clinical implications
	PhD(BD)	Rodrigues, Sofia	Isabel Palmeirim (ICVS)	Molecular and Cellular Characterization of Somitogenesis in Early Chick Development
	PhD(BD)	Santos, Marta	Jorge Correia-Pinto (ICVS) Isabel Palmeirim (ICVS)	Development mechanisms of normal and hypoplastic fetal lungs
PhD(BD)	Silva, Liliana	Isabel Palmeirim (ICVS) Martin Catala (Univ. Paris)	Control of the anteroposterior patterning of axis and the somitogenesis processes	

**PhD (BD)** = PhD students with a grant from FCT

**PhD** = PhD Students with funding from projects or the ICVS

**MD** = Medical Doctor

**MT** = Master students (thesis research work)

**ICBAS** = Institute of Biomedical Sciences Abel Salazar

**ICVS** = Life and Health Sciences Research Institute

**IPATIMUP** = Institute for Molecular Pathology and Immunology, University of Porto

**UM** = University of Minho

**UP** = University of Porto.

## IV.2 Other Research Students: Themes and Supervisors

RESEARCH AREA	POSITION	STUDENT	SUPERVISOR(S)	THESIS THEME
<b>Infectious Diseases</b>	BI	Barroso, António	Jorge Pedrosa (ICVS)	Strategies to improve the therapeutic effect of anti-mycobacterial drugs
	BTI	Carmona, Jenny	Fernando Rodrigues (ICVS)	Cellular and molecular analysis of the cellular division in <i>Paraccoccidioides brasiliensis</i>
	BI (IBMC)	Domingues, Sofia	Gil Castro (ICVS)	The immune response to allografts: role of anti-inflammatory cytokines
	BI	Mesquita, Ana M <sup>a</sup>	Paula Ludovico (ICVS)	Identification and characterization of mycotoxins modulators of host immune system
	BI	Oliveira, Martinha	Jorge Pedrosa (ICVS)	Mycobacteriosis of difficult treatment (Buruli ulcer): Impact in public health
<b>Neurosciences</b>	BI	Valdigem, Gustavo	Fernando Rodrigues (ICVS)	Molecular and cellular mycology: epidemiology and risk factors
	BI	Carrão, Catarina	Armando Almeida (ICVS)	Multisynaptic pathways implicated in the endogenous pain control system uncovered by the use of transneuronal tracing viruses
	Assist.	Carvalho, André (MD)	Nuno Sousa (ICVS)	Pharmacological interventions modulating the limbic control of the HPA axis: the role of ghrelin
	BI	Castro, Andreia	Patrícia Maciel (ICVS)	Study of the misfolding response in animal models of Machado-Joseph disease
	BI	Ferreira, Eduardo	Joana Palha (ICVS)	Searching of an essential function for transthyretin in the central nervous system
	BI	Fernandes, Anabela	Patrícia Maciel (ICVS)	Characterization of transgenic mice for Machado-Joseph disease
	Assist.	Leão, Pedro	Nuno Sousa (ICVS)	The ventral striatum system following chronic stress
	BI	Leite-Almeida, Hugo	Armando Almeida (ICVS)	Role of the medullary dorsal reticular nucleus in the modulation of chronic pain

	Assist.	Taipa, Ricardo (MD)	Nuno Sousa (ICVS)	"Cognitive enrichment" as a model to revert limbic functional impairments
	Assist.	Tavares, Hugo (MD)	Nuno Sousa & Patrícia Maciel (ICVS)	Febrile convulsions: structural and behavioural impact
	Researcher	Valle-Fernandes, Ana Lúcia	Armando Almeida (ICVS)	Technical assistance in pain research
<b>Development &amp; Neoplasia</b>	BI	Gomes, Ana	Rui M. Reis (ICVS)	Analysis of c-kit alterations in human tumours
	BTI	Ferreira, Mónica	Isabel Palmeirim (ICVS)	Aprendizagem de técnicas de Biologia do Desenvolvimento utilizando a galinha como modelo
	Assist.	Fernandes, João Paulo (MD)	Jorge Correia Pinto (ICVS)	PACAP modulation of fetal lung growth
	Assist.	Gonçalves, Carla Rolanda (MD)	Jorge Correia Pinto (ICVS)	The role of ghrelin in short bowel syndrome
	Assist.	Torrão, Luis (MD)	Jorge Correia Pinto (ICVS)	Ocular ghrelin gene expression in fetal and adult rats
	Assist.	Bastos, Pedro (MD)	Jorge Correia Pinto (ICVS)	Ghrelin mRNA gene expression during fetal lung development
	Assist.	Melo-Rocha, Gustavo (MD)	Jorge Correia Pinto (ICVS)	Cardiac calcium kinetics-related proteins in the pregnant rat
	Mon.	Nogueira-Silva, Cristina	Jorge Correia Pinto (ICVS)	The role of IL-6 in normal and hypoplastic lung
	Assist.	Roriz, José-Mário (MD)	Jorge Correia Pinto (ICVS)	Ghrelin mRNA gene expression during fetal lung development

**BI** = Research grant from either FCT or projects

**Assist.** = ECS Assistant

**Mon.** = ECS Monitor

**BTI** = Technical research grant from projects

**ICVS** = Life and Health Sciences Research Institute

**APPENDIX V**

*“Ciência Falada no ICVS” – Talking About Science at ICVS / Seminars*

**“Ciência Falada no ICVS” – Scientific Seminars at ICVS: List of the seminars and respective internal and external invited speakers**

1. "Vocalization and Vocal Muscle Motor End Plate Distribution in Vertebrates", January 11  
Speaker: Lima Rodrigues, MD. PhD-student. ICVS – ECS
2. "Clinical and experimental contribution for the study of Congenital Diaphragmatic Hernia", January 18  
Speaker: Jorge Correia Pinto, MD PhD. ICVS – ECS
3. "Genetic causes of schizophrenia: Neurogranin - a candidate gene", January 25  
Speaker: Dina Ruano, PhD-student. ICVS – ECS
4. "*Paracoccidioides brasiliensis*: development of molecular genetic tools", February 1  
Speaker: Margarida Martins , Master student. ICVS – ECS
5. "Chronic neuropathic pain induces neuroplasticity in the amygdala and changes in emotional behavior", February 15  
Speaker: Leonor Gonçalves , PhD Student. ICVS
6. "Effective MedLine and PubMed Searching" , February 22  
Speaker: Roger Thomas, MD. PhD. University of Calgary, Alberta, Canada
7. "Characterization of MAPK pathway in gliomas: Studies of oncogenes EGFRVIII and B-RAF", March 1  
Speaker: Diana Basto, Master Student. ICVS
8. "The Role of the Brain in Chronic Pain Processing", March 8  
Speaker: Armando Almeida, PhD. ICVS – ECS
9. "Is apoptosis a pathological mechanism in cytochrome oxidase deficiencies?", March 15  
Speaker: Rodrigo Oliveira, Master Student. ICVS
10. "Infection versus Autoimmunity: a regulatory role for IFN $\gamma$ ", March 22  
Speaker: Andrea Cruz, PhD Student. ICVS
11. "Yeast programmed Cell Death: an intricate puzzle!", April 12  
Speaker: Paula Ludovico, PhD. ICVS – ECS
12. "Role of the paraventricular hypothalamic nucleus (PVN) in pain control", April 19  
Speaker: Filipa Pinto Ribeiro, PhD Student. ICVS – ECS
13. "New perspectives for the use of gene therapy in the control of chronic pain from brain centers", April 26  
Speaker: Isaura Tavares, PhD. Faculty of Medicine & IBMC, University of Porto
14. "Tyrosine kinase inhibitors- The role of pathologist in an era of molecularly targeted therapy", May 3  
Speaker: Fernando Schmitt, MD. PhD

15. "Buruli ulcer: an experimental model to elucidate the biology of infection by *Mycobacterium ulcerans*", May 10  
Speaker: Jorge Pedrosa, PhD. ICVS – ECS
16. "Interaction between anxiety and depression in animal models of behaviour: insights on neuroplasticity and cognitive function", May 17  
Speaker: João Bessa, MD. PhD Student. ICVS – ECS
17. "The centrality of the Post-graduation and research in the Boulogne process", May 24  
Speaker: Sérgio Machado dos Santos, PhD. ECS
18. "Thyroid function during pregnancy and psico-motor development of the progeny", May 31  
Speaker: Maria José Costeira, MD. PhD-Student. ICVS
19. "Gene Therapy and Congenital Diaphragmatic Hernia", June 7  
Speaker: Sílvia Gonzaga, PhD Student. ICVS
20. "Importance of RAD51, XRCC1 and TP53 genetic polymorphisms to familial and sporadic breast cancer susceptibility", June 14  
Speaker: Sandra Costa, PhD Student. ICVS
21. "*C. elegans*: a simple model to study a complex disease", June 21  
Speaker: Ana João Rodrigues, PhD Student. ICVS
22. "Medical education: the project, the team and its success", June 28  
Speaker: Manuel João Costa, PhD. ECS
23. "*Plasmodium*-Host: the arm-wrestling of a malarial infection", July 5  
Speaker: Maria Mota, PhD. Molecular Medicine Institute, Faculty of Medicine of Lisbon
24. "Instructional Software for higher education", July 29  
Speaker: Guilherme A. Marson, Institute Suisse de Recherche Experimentale Sur leCancer
25. "The Prefrontal Cortex: insights into its structural organization following chronic stress and role in cognition", September 6  
Speaker: João Cerqueira, MD. PhD Student. ICVS – ECS
26. "The war on cancer: conventional vs. targeted therapy", September 13  
Speaker: Fátima Baltazar, PhD. ICVS – ECS
27. "Clock-like interactions: Hairy1 protein partners in vertebrate embryo development", September 20  
Speaker: Raquel Andrade, Pos-Doc. ICVS
28. "Hormone mediated nuclear effects, Bioinformatics and the scholarship of teaching and learning (SOTL)""", September 27  
Speaker: João Carlos Sousa, Pos-Doc & Manuel João Costa, PhD. ICVS – ECS
29. "cAMP and cell cycle", October 6  
Speaker: Max Gottesman, Director of the Institute of Cancer Research, Columbia University, New York



30. "E-cadherin germline mutations in hereditary diffuse gastric cancer: implications for genetic testing and clinical management", October 11  
Speaker: Raquel Seruca, MD. PhD, IPATIMUP
31. "Characterisation of mouse ataxin-3", October 18  
Speaker: Maria do Carmo Costa, PhD Student. ICVS
32. "Glutamate receptors and signal transduction mechanisms", October 25  
Speaker: Ana Luísa Carvalho, PhD. Centro de Neurociências de Coimbra, Universidade de Coimbra
33. "Yeast model of Batten disease: From oxidative to physiological stress", November 8  
Speaker: Fernando Rodrigues, PhD. ICVS – ECS
34. "NT-proBNP sérico como novo factor de prognóstico do RN com Hérnia Diafragmática Congénita", November 15  
Speaker: Maria João Baptista, MD, PhD Student. ICVS – ECS
35. "Intracellular growth of *Mycobacterium ulcerans*: implications for the nature of the immune response", November 22  
Speaker: Egidio Torrado, PhD-Student. ICVS
36. "HIV/AIDS: the successes, failures and the future", November 29  
Speaker: Rui M. M. Vitorino, MD.PhD. Faculty of Medicine of Lisbon, Hospital Santa Maria and Molecular Medicine Institute
37. "Stress and Anxiety: extending Amygdala beyond Fear", December 6  
Speaker: José Miguel Pêgo, MD, PhD Student. ICVS – ECS
38. "Barriers of the brain: protecting or mediating inflammation?", December 13  
Speaker: Joana Palha, PhD. ICVS - ECS

