

SCHOOL OF HEALTH SCIENCES

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

**ANNUAL REPORT
2007**

INDEX

	Page
1. INTRODUCTION	.....3
2. STRATEGIES AND OBJECTIVES FOR 2007	.....4
3. ORGANIZATION AND MANAGEMENT	.....5
4. ACTIVITIES AND MAIN ACHIEVEMENTS IN 2007	.....6
4.1. Ongoing Research Lines / Teams	.....6
4.2. Externally Funded Projects	.....8
4.3. Scientific Production	.....9
4.4. Scientific Seminars at the ICVS – “Ciência Falada no ICVS”	....10
4.5. International Post-graduate Programme	....10
4.6. Initiatives in Science & Society	....11
4.7. Other Research Activities	....11
5. THE ICVS PROGRESS IN THE PERIOD 2002-2007	...12
5.1. Human Resources	...12
5.2. Facilities and Laboratory Management	...13
5.3. Financial Resources	...13
5.4. Scientific Results	...14
6. FUTURE VISION OF THE UNIT'S ACTIVITIES	...15
7. FINAL REMARKS	...16
 APPENDICES	
I – <i>Researchers and Support Staff at the ICVS</i>	...18
II – <i>Externally Funded Projects</i>	...24
III – <i>Scientific Production</i>	...30
IV – <i>Initiatives in Science & Society</i>	...65
V – <i>Other Research Activities</i>	...73
VI – <i>ICVS/External Advisory Committee Report</i>	...76

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.

The developmental strategy of the ICVS was based on the following organizational procedures:

- Creation and consolidation of multi- and inter-disciplinary research groups.
- Integrated/shared management and function-oriented laboratories, which rationalizes resources.
- Incentive to scientific production, namely by awards to the paper with higher IF and to the Domain with higher accumulated IF and support of publication costs.
- Innovative post-graduation, organized on a yearly basis as an International Post-graduation Programme that offers advanced training in medicine and basic sciences.

At the same time, the ICVS, as a research structure within the ECS, should also assure that its staff develops 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.

The research activities are organized into three Research Domains:

- DEVELOPMENT AND NEOPLASIA
- MICROBIOLOGY AND INFECTION
- NEUROSCIENCES

During 2007, 113 researchers (31 PhD, 49 PhD students, 7 Master students and 26 other graduated researchers) were actively involved in research activities at the ICVS

supported by 18 members of the non-academic staff shared with the School. There are 32 ongoing externally funded projects. The results from the scientific work in 2007 were also meaningful, especially the international publications that comprise (including those *in press*) 136 papers, 7 book chapters and 39 abstracts in Congresses.

The present report provides an overall view of the ICVS's main progresses and activities in 2007 and the underlying strategies. Furthermore, a self-assessment of the activities developed in 2007 in comparison with the four former years, 2003, 2004, 2005 and 2006, is also presented.

2. STRATEGIES AND OBJECTIVES FOR 2007

The strategy defined for the development of the ICVS (presented in former Reports – 2003, 2004, 2005 and 2006 - available at ECS/ICVS web page) is based on consolidation and integration.

In accordance, the main objectives established for 2007 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, (iii) to continue the preparation of appropriate facilities and equipments to provide services to the community and (iv) to enhance the clinical research infrastructure to foster clinical research.

Therefore, the specific aims for 2007 were the following:

- increase the number of Post Docs for at least 30% 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 and promote the diversification of funding sources;
- planning the laboratory facilities of the new building of the School of Health Sciences, to be completed by the end of 2007, which includes a specific area for the ICVS of 6 000 m².

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 are:

- The Scientific Council (SC) - includes all PhD members of the ICVS and meets on a monthly basis, focusing its activities on the planning, development and evaluation of the research activities.
- The Director, that liaises with the Scientific Council
- The Directive Board (DB) – is coordinated by the ICVS Director and integrates one representative of each Research Domain and one representative from the ECS Directive Board. The activities are centred on monitoring the ongoing activities, establishing the operating rules, determining the sharing of running expenses and planning the ICVS funding.

In 2007 its composition was:

- 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”)
- Isabel Maria Mestre Marques Palmeirim Alfarra Esteves (representative of “Development and Neoplasia”)
- Paula Cristina da Costa Monteiro Alves Ludovico (representative of “Microbiology and Infection”)
- The External Advisory Committee - appointed at the end of 2005, integrates three international experts:

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

At the scientific operational level, within each Research Domain (RD) there is a Coordination Committee, composed by the PhD members of the RD with a contractual link with the ECS/ICVS, responsible for the scientific coordination of the RD and for proposing the creation/elimination of research lines within the domain, accordingly to the developmental strategies.

4. ACTIVITIES AND MAIN ACHIEVEMENTS IN 2007

4.1. Ongoing Research Lines / Teams

The ICVS, having a multidisciplinary and integrative approach, develops basic, translational and clinical research that is organized into three Research Domains (RD):

DEVELOPMENT AND NEOPLASIA

MICROBIOLOGY AND INFECTION

NEUROSCIENCES

We will next briefly summarize the present teams and the research lines within each RD. An autonomous report was prepared for each of the three research domains, detailing the aims within each research line, the budget allocation, the tools, and the expected outcomes for 2008-2010.

DEVELOPMENT AND NEOPLASIA

Team

The Development and Neoplasia team is presently composed of:

- 11 PhD (5 Faculty members and 6 Post-Doc fellowships)
- 14 PhD students
- 2 Master students
- 9 other graduated Researchers:

Research Lines

The main goal of the research is on Development Biology and Neoplasia. Presently, there are four established Research Lines:

- Chronobiology in development (Coordinator: Isabel Palmeirim);
- Cancer biomarkers (Coordinator: Rui M. Reis);
- Lymphangiogenesis and angiogenesis (Coordinator: Adhemar Longatto);
- Fetal and Neonatal physiology and a new emerging one 3rd Generation Surgery (Coordinator: Jorge Correia-Pinto)

MICROBIOLOGY AND INFECTION

Team

The Microbiology and Infection team is presently composed of:

- 10 PhD (7 Faculty members and 3 Post-Doc fellowships)
- 10 PhD students
- 4 Master students
- 5 other graduated Researchers

Research Lines

The main goal of research addresses the study of microorganisms and their relevance in biomedicine as infectious agents or as study models. The domain grouped its specific aims into three main research lines:

- Immunology of Infection (Coordinator: Jorge Pedrosa)
- Clinical Microbiology (Coordinator: Fernando Rodrigues)
- Unicellular Eukaryotic Model Systems (Coordinator: Paula Ludovico)

NEUROSCIENCES

Team

The Neuroscience team is presently composed of:

- 9 PhD (5 Faculty members and 4 Post-Doc fellowships)
- 25 PhD students
- 1 Master student
- 12 other graduated Researchers

Research Lines

The research, focused on Integrative Neuroscience of Behavior, has three research lines:

- Developmental programming of behavioural and hormonal responses – Coordinator: Patrícia Maciel;
- Neurodegeneration and repair in aging and in disease – Coordinator: Armando Almeida;
- Neuroimmunology – Coordinator: Joana Palha.

4.2. Externally Funded Projects

There are 32 ongoing projects coordinated by ICVS members (Project PIs) and 3 projects with funds allocated to ICVS researchers, with external funding from:

- Portuguese Science Foundation (FCT) - 16 projects
- Calouste Gulbenkian Foundation - 3 projects
- Innovation Agency - 1 project
- Bial Foundation - 1 project
- AtaxiaMJD (U.S.A.) - 1 project
- Dana Foundation Program in Neuroimmunology (U.S.A.) - 1 project
- Bayer Schering Pharma - 1 project
- Max Planck Institute - 1 project
- Pfizer/Medical Sciences Society of Linbon - 1 project
- Portuguese Society of Urology - 2 projects
- Portuguese Society of Digestive Endoscopy - 1 project
- Portuguese Society of Cardiology - 1 project
- Portuguese Society of Pneumology - 1 project
- Portuguese Society of Paediatrics - 1 project.

The list of these ongoing projects is presented in *Appendix II*.

4.3. Scientific Production

Scientific production in 2007 is summarized in Table 1. Detailed information about each indicator as well as the Journal's Impact Factor and number of papers is presented in Appendix III.

Table1. Scientific Production in 2007

Indicators	2007
International publications	
<i>Papers (including those in press)</i> <i>(see Journals Impact Factor in footnote)*</i>	136 (40 in press)
<i>Book Chapters (including those in press)</i>	7 (6 in press)
<i>Abstracts in Congresses</i>	39
National publications	
<i>Papers</i>	5
<i>Book Chapters</i>	1
<i>Abstracts in Journal Supplements</i>	2
International Conferences, Seminars and other Communications	28
Organization of Seminars and Conferences	
<i>Organization of Scientific Meetings and Presence in Scientific Committees</i>	7
<i>Scientific Seminars at the ICVS - "Ciência Falada no ICVS"</i>	34
PhD, Master and other Thesis	
<i>Thesis concluded</i> <i>PhD thesis</i>	6
<i>Master thesis</i>	2
<i>Undergraduate thesis</i>	6
<i>Thesis under development</i> <i>PhD thesis</i>	44
<i>Master Thesis</i>	6
Post-graduation courses and Workshops organized by the ICVS	13
Patents and Scientific research prizes	
<i>Patents</i>	1
<i>Internal ICVS Prizes</i>	2
<i>External Prizes</i>	7

*** Journal's Impact Factor (IF) and number of papers**

7 < IF < 14: 5 papers; 6 < IF < 7: 14 papers; 4 < IF < 6: 25 papers; 2 < IF < 4: 50 papers; IF < 2: 24 papers; without IF allocated: 18 papers (see Appendix III).

4.4. Scientific Seminars at the 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 are invited to present their work.

In 2007, 34 seminars were organized: 18 by PhD students, 3 by Master students, 2 by Post-doc students, 2 by PhD seniors of different research groups and 9 by external invited researchers.

The list of these seminars is presented in Appendix III.

4.5. International Post-graduate Programme

In 2007, and for the seventh consecutive year, we offered a highly specialized training for medical doctors and investigators in biomedical sciences.

The 2007 programme comprised nine courses and four workshops and counted with a total of 257 participants. It included novel courses in diverse scientific areas and also new editions of the courses “Laboratory Animal Science” and “Neurosurgery: Cerebral Sulci, Gyri and Ventricles”, that had been very successful in previous years and that continue to represent areas of demand among the participants. In particular, for the third consecutive year we offered the training on “Laboratory Animal Science”, which provides international certification for research using animal models. For the fourth time the course “Neurosurgery: Cerebral Sulci, Gyri and Ventricles” took place reinforcing the relevance of the new laboratory of neurosurgery for advanced training in the new facilities.

Among the multiplicity of courses and workshops offered we would like to highlight the course “Minimally Invasive Surgical Week: Laparoscopy, Endoscopy and 3rd Generation Surgery” that took place in the new ECS/ICVS facilities and allowed the specialized training of medical doctors on the third generation surgery, a novel and emerging area on surgery. The workshop “Basic Training on Multiple Choice Testing” was also very successful. The school was contacted by “Instituto de Ciências Biomédicas Abel Salazar/Hospital Geral de Santo António (ICBAS/HGSA) and a second edition of this workshop took place during 2007 in ICBAS/HGSA.

Detailed information is presented in Appendix III.

4.6. Initiatives in Science & Society

ICVS researchers have been participating in several initiatives aiming to spread the scientific knowledge among the community, such as: i) cooperation with media through the participation on TV and radio programmes and interviews to newspapers; ii) participation as invited speakers in Conferences Cycles promoted by society; iii) participation in national initiatives of science promotion, namely “Portas Abertas” during the Science and Technology Week and iv) launching public debate on science topics. In addition, upon request we have also received visits from high schools. Individual members were also invited to specific activities organized by the community, such as talks in “Cafés” and in Schools.

Detailed information of the several initiatives is presented in Appendix IV. It includes a full report of the “Portas Abertas” (Open Labs, Scientists for a day) that took place on the 22nd and 23rd of November, 2007. In the scope of this initiative, the ICVS/ECS promoted to a series of activities involving 4th, 7th and 10-12th grade students, in a total of 380 young scientists. “Hands-on” experiments were designed for each of the three educational levels above, to allow our young visitors to become “Scientists for a day”.

4.7. Other Research Activities

The ICVS members were also involved in several other research activities that include:

- Participation in Bilateral Actions
- Participation in International Network
- Participation in Evaluation Panels
- Membership of the Editorial Board of National / International Journals
- Participation on International Societies
- Collaboration with National and International Research Institutions

Detailed information is presented in Appendix V

5. THE ICVS PROGRESS IN THE PERIOD 2002-2007

5.1. Human Resources

Since its creation in 2002-03, there was a significant expansion of human resources in the ICVS, which allowed the consolidation of the research groups. Fig. 1 clearly shows the significant expansion of the human resources. The number of PhD students increased throughout the years, while the number of Researchers|*Licenciados* was generally maintained, which indicates a progression in the scientific differentiation of the ICVS staff. Moreover, an increase in the number of Post-Docs is noticeable, which in 2007 reached a total of 13.

	2002	2003	2004	2005	2006	2007
Researchers | PhDs	12	16	17	21	24	31
- Faculty	(11)	(13)	(14)	(15)	(16)	(18)
- Fellowships (Post-doctoral researchers)	(1)	(3)	(3)	(6)	(8)	(13)
Researchers | PhDs Students	8	21	33	37	40	49
Researchers | <i>Licenciados</i>	31	36	37	31	34	33
Laboratories Support Staff	6	8	10	10	15	14
Other Support Staff (Projects Office, Post-Graduation Office, Promotion Office & Informatics Support)	1	1	2	2	2	4
TOTAL	58	82	100	101	115	131

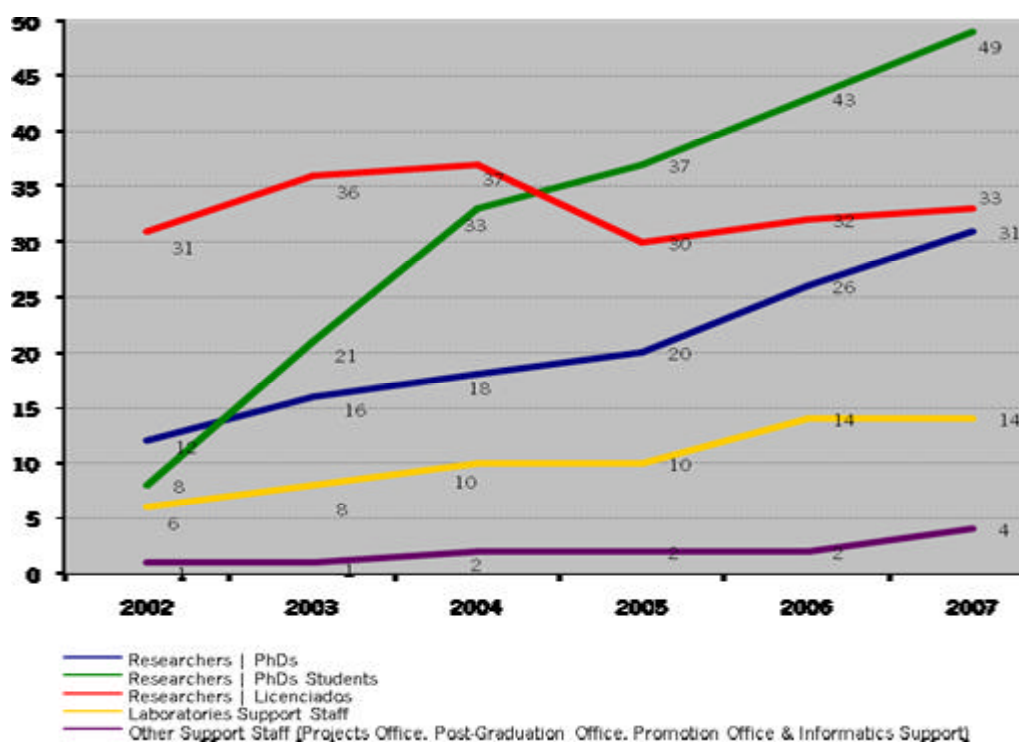


Fig. 1. ICVS Progression of Human Resources

5.2. Facilities and Laboratory Management

The ICVS, for the major part of 2007, was still installed in provisional facilities, and the process of setting up the laboratories in the new building began by the end of 2007. As stated in previous reports, the definitive building of ECS/ICVS includes an independent area for the ICVS with 6 000 m², with laboratories organized in an “open space” concept and a specific area for each of the 3 ICVS RDs. However, and following the strategy adopted in the provisional facilities, laboratories are organized by function, in a network of shared facilities to support, in a multidisciplinary way, the activities of the different RDs. Detailed information about the ICVS facilities is available at the *web* page of the School.

A crucial limitation to the ICVS activities in the near future is still the lack of funding for the construction of a New Animal Facility, which would serve transversally the units developing biological and biomedical research at the UM. Presently, an animal facility with a limited capacity for animal models is available and fully functional. However, as recognized by the External Advisory Committee of the ICVS (see EAC's Report in Appendix VI), the construction of an animal facility in the new building of ECS/ICVS is crucial for the development of all research activities of the ICVS.

5.3. Financial Resources

The following pluriannual funding contracts are presently ongoing.

1. 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 305 757 Euros were actually transferred in 2007.
2. 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 300 000 Euros were actually transferred: 100 000 Euros in 2005, 200 000 Euros in 2006 and zero in 2007 (the remaining 1.2 million was not yet transferred).

Regarding the basal funding for the ICVS, the FCT has transferred in 2007 an amount of 90 000 Euros, which corresponds to the officially allocated value for 2007.

The research projects at the ICVS, with an average duration of three years, attracted external funding of about 1,84 million Euros, of which 484 727 Euros correspond to the activities in 2007.

In conclusion, in the year 2007 the ICVS had a total external income of around 0.88 million Euros.

Notwithstanding the external financing granted in 2007, the ECS continued to assure the maintenance costs of facilities and general expenses to all research groups.

5.4. Scientific Results

Along the past 5 years (2003-2007), the international scientific production indicators (papers and book chapters) showed a remarkable increase in the number of papers and on the average Journal Impact Factors.

Table 2. - Scientific Production

Indicators \ Year	2003	2004	2005	2006	2007
International publications					
<i>Papers</i> (those <i>in press</i> are not included) *	25	36	49	46	96
<i>Book Chapters</i> (those <i>in press</i> are not included) *	2	1	6	1	1
<i>Abstracts in Congresses</i>	40	60	45	84	39
National publications					
<i>Papers</i>	1	5	2	6	5
<i>Book Chapters</i>	1	2	3	1	1
Thesis concluded					
<i>PhD thesis</i>		1	3	6	6
<i>Master thesis</i>	2	1	2		2
<i>Undergraduate thesis</i>	10			6	6
Thesis under development					
<i>PhD thesis</i>	18	32	36	37	44
<i>Master Thesis</i>	2	7	8	4	6
Scientific research prizes	5	10	11	10	7
Post-graduation courses and Workshops organized by the ICVS	6	10	10	15	13

* In this pluriannual analysis the publications *in press* were not considered, while they were included in the annual analysis of scientific production presented in Table 1.

6. FUTURE VISION OF THE UNIT'S ACTIVITIES

As stated in the report for FCT “Unidades de I&D: Programa de Financiamento Plurianual: Avaliação 2007”, the period 2007-2010 is viewed as a consolidation period for the ICVS; however, specific developments with the established Research Domains and the creation of complementary research areas are envisaged.

The three Research Domains are now established. Strong interactions between the 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 Journals' Impact Factor and number of citations) and expand the number of competitive funded national and international collaborative research projects.

Being a biomedical research centre, the ICVS also aims to expand its research activities from the basic and translational to clinic research. This task is viewed as a critical tool to support the concept of physician-scientists in Portugal that will ultimately improve the quality of medical assistance in the Minho region and in Portugal. We are aware of the national handicap in clinical research but we are planning several training initiatives in clinical research (in collaboration with other national and international institutions). In accordance the ICVS submitted 16 proposals for a specific call on clinical research opened by FCT in 2007.

The post-graduation programmes will be maintained and an effort will be done to promote the increase in number of post-graduation courses devoted to Clinical Sciences, directed to MDs, to establish an organized programme for continuous medical education.

The beginning of the MD/PhD programme in 2006, in collaboration with Thomas Jefferson Medical School and the Columbia University Medical School, was another major challenge successfully accomplished in 2007. We plan to continue and extend the programme by increasing the number of participating students in the next years.

Therefore, the specific aims to be reached until 2010 are to:

- increase the number of researchers (by about 100%);
- attract national and international PhD students and Post-Docs;
- support the increase, for at least 100%, of researchers engaged in the clinical areas, in order to competitively apply for clinical research funding;
- enhance by, at least, 25% the Total Impact Factor/PhD;
- maintain the ICVS policy of promotion and recognition of scientific excellence by internal awards;

- promote the divulgation of ICVS activities in the community;
- redefine the funding strategy of the ICVS by: i) expanding the number of competitive funded collaborative international research projects; ii) promoting initiatives of philanthropy in the community and iii) implementing biomedical services. Together these initiatives are planned to reach up to 50% of the total ICVS funding.
- actively pursue the complement of the contract established with the FCT for the ICVS's funding.

Finally, the moving of the ICVS to the novel facilities will be challenging also in what concerns the maintenance of sustainable excellence research level and integration of new research lines as described in detail in the research domains' individual reports.

7. FINAL REMARKS

The analysis of the present report illustrates a very positive progression of the scientific production (both quantitatively and qualitatively) of the ICVS in 2007. In addition, the enthusiasm, commitment, availability and competence of this scientific community – faculty, staff, and students – continue to be a major strength of the Institute.

In what concerns the objectives proposed for 2007, namely the increase in the scientific production and in the differentiation of the research staff, very positive developments were achieved. The number of Post-Docs increased to a total of 13. As for the scientific production, the number of papers increased remarkably and a higher scientific impact of the publications (expressed by the Journal Impact Factor) was achieved.

It is also noticeable the involvement of undergraduate students in research, particularly in what concerns the students from the Medical degree Course of the ECS that are actively involved not only in the electives proposed within the medical degree curriculum, but also in the laboratory rotations of the MD/PhD Programme. Two students have formally initiated their PhD thesis in 2007 (one student in Thomas Jefferson Medical School and the other in Columbia University Medical School).

The goals that we have set forth for the near future 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
ICVS Director
December, 2007*

APPENDICES

Page

APPENDIX I18

Researchers and Support Staff at the ICVS

APPENDIX II24

Externally Funded Projects

APPENDIX III30

Scientific Production

APPENDIX IV65

Initiatives in Science & Society

APPENDIX V73

Other Research Activities

APPENDIX VI76

ICVS/External Advisory Committee Report

APPENDIX I

Researchers and Support Staff at the ICVS

PhD RESEARCHERS

Name	Qualification	ECS Position (Rank)	Research Domain
Agostinho João Ramalho Almeida*	PhD	PD	Microbiology and Infection
Andrea Patrícia Cruz*	PhD	PD	Microbiology and Infection
António Gil Pereira de Castro	PhD	Assistant Professor	Microbiology and Infection
Elsa Logarinho	PhD	Assistant Professor	Microbiology and Infection
Fernando José Santos Rodrigues	PhD	Assistant Professor	Microbiology and Infection
Jorge Manuel Rolo Pedrosa	PhD	Associate Professor	Microbiology and Infection
Margarida Correia-Neves	PhD	Assistant Professor	Microbiology and Infection
Margarida Saraiva	PhD	PD	Microbiology and Infection
Maria Cecília L. P. Estrela Leão	PhD	Director/Full Professor	Microbiology and Infection
Paula Cristina C. A. M. Ludovico	PhD	Assistant Professor	Microbiology and Infection
Adriana C. Soares Sampaio	PhD	PD	Neurosciences
António Salgado	PhD	PD	Neurosciences
Armando Alberto N. Pinto Almeida	PhD	Assistant Professor	Neurosciences
Cláudia M. C. Ferreira Botelho	PhD	PD	Neurosciences
Joana Almeida S. Pacheco Palha	PhD	Associate Professor	Neurosciences
João Carlos Cruz Sousa****	PhD	PD/Assistant Professor	Neurosciences
João José Cerqueira	MD/PhD	Assistant Professor	Neurosciences
Nuno Jorge Carvalho de Sousa	MD/PhD	Associate Professor	Neurosciences
Patrícia Espinheira de Sá Maciel	PhD	Assistant Professor	Neurosciences
Adhemar Longatto Filho	PhD	Assistant Professor	Development & Neoplasia
Fernanda Vinagre Bajanca	PhD	PD	Development & Neoplasia
Isabel M ^a Palmeirim A. Esteves	MD/PhD	Assistant Professor	Development & Neoplasia
Joana C. de Amorim F. Paredes**	PhD	PD	Development & Neoplasia
Jorge Manuel Correia Pinto	MD/PhD	Associate Professor	Development & Neoplasia
Maria de Fátima M. Baltazar	PhD	Assistant Professor	Development & Neoplasia
Maria de Fátima Pereira Duarte**	PhD	PD	Development & Neoplasia
Nuno Pires**	PhD	PD	Development & Neoplasia
Raquel G. V. Pêgo de Andrade	PhD	PD	Development & Neoplasia
Rui Manuel Vieira Reis	PhD	Assistant Professor	Development & Neoplasia
Rute Carina Silva Moura	PhD	PD/Assistant Professor	Development & Neoplasia
Manuel João T. Mendes da Costa	PhD	Assistant Professor	Medical Education

POST-GRADUATION RESEARCHERS

PhD Students

Name	Qualification	ECS Position (Rank)	Research Domain
Agostinho Albérico R. Carvalho	Lic.	BD	Microbiology & Infection
Alexandra Gabriel Fraga	Lic.	BD	Microbiology & Infection
Ana Maria Macedo Mesquita	Lic.	BD	Microbiology & Infection
Bruno Miguel B. R. Almeida	Lic.	BD	Microbiology & Infection
Cláudia Nóbrega	Lic.	BD	Microbiology & Infection
Egídio Manuel Torrado*	Lic.	PD	Microbiology & Infection
Maria Alexandra Silva	Lic.	BD	Microbiology & Infection
Maria Rosinda Teixeira Coelho	Lic.	BD	Microbiology & Infection
Nuno Miguel Sampaio Osório	Lic.	BD	Microbiology & Infection
Teresa Maria Gonçalves Martins	Lic.	BD	Microbiology & Infection
Alexander Patchev	MD	PhD student	Neurosciences
Ana João Gomes Rodrigues	Lic.	BD	Neurosciences
Ana Raquel Franky G. Carvalho	Lic.	MD/PhD Student	Neurosciences
Ana Raquel Marcelino Mesquita	Lic.	BD	Neurosciences
Anabela Silva Fernandes	Lic.	BD	Neurosciences
Andreia Teixeira Castro	Lic.	BD	Neurosciences
Eduardo Miguel G. Ferreira	Lic.	BD	Neurosciences
Fausto Manuel V. S. Fernandes	MD	PhD student	Neurosciences
Fernanda Cristina G. S. Marques	Lic.	BD	Neurosciences
Filipa Santos Costa Pinto Ribeiro	Lic.	Assistant	Neurosciences
Hugo Miguel Vale L. S. Almeida	Lic.	Monitor/BD	Neurosciences
João Miguel Seíça Bessa Peixoto	MD	Assistant	Neurosciences
Jorge A Berkeley Cotter	MD	Clinical Supervisor	Neurosciences
José M. Gomes Moreira Pêgo*	MD	Assistant	Neurosciences
Laurinda M ^a S. Guimarães Lemos	MD	PhD student	Neurosciences
Manuel José Lima C. Rodrigues	MD	Assistant	Neurosciences
Maria do Carmo Pereira da Costa	Lic.	BD	Neurosciences
Maria José T. C. Costeira Paulo	MD	PhD student	Neurosciences
Maria Leonor Barbosa Gonçalves	Lic.	BD	Neurosciences
Mário Jorge Alves Oliveira	MD	Assistant	Neurosciences
Mónica Joana Pinto Santos*	Lic.	BD	Neurosciences
Pedro Alexandre L. A. G. Teixeira	MD	Assistant	Neurosciences
Rui Jorge de Freitas da Silva*	Lic.	BD	Neurosciences
Susana Roque ***	Lic.	BD	Neurosciences
Tiago Gil Rodrigues Oliveira	Lic.	MD/PhD Student	Neurosciences

André João A. M. S. Albergaria	Lic.	BD	Development & Neoplasia
Bruno Filipe Marques Costa	Lic.	BD	Development & Neoplasia
Carla Rolanda Gonçalves	MD	Assistant	Development & Neoplasia
Céline Pinheiro	Lic.	BD	Development & Neoplasia
Cristina Isabel Nogueira da Silva	MD	Monitor	Development & Neoplasia
Estêvão Augusto Rodrigues Lima	MD	Assistant	Development & Neoplasia
Liliana Alexandra Osório Silva	Lic.	BD	Development & Neoplasia
Maria João Ribeiro Leite Baptista	MD	Assistant	Development & Neoplasia
Marta Sofia Viana Pereira	Lic.	BD	Development & Neoplasia
Sandra Maria Araújo da Costa*	Lic.	BD	Development & Neoplasia
Sheeba Franklin	MSc	BD	Development & Neoplasia
Sílvia Gonzaga da Silva Santos	Lic.	BD	Development & Neoplasia
Tatiana Resende	Lic.	BD	Development & Neoplasia
Tiago Henriques-Coelho	MD	PhD student	Development & Neoplasia

Master Students

Name	Qualification	ECS Position (Rank)	Research Domain
Carina Ferreira	Lic.	MT	Microbiology & Infection
Matilde Barbosa	Lic.	MT	Microbiology & Infection
Nuno Santos*	Lic.	MT	Microbiology & Infection
Sandra Cristina B. Alves Pereira	Lic.	MT	Microbiology & Infection
Joana Fraga	Lic	MT	Neurosciences
Isis Legath Alonso	Lic	MT	Development & Neoplasia
Marta Tibúrcio	Lic	MT	Development & Neoplasia

Other Researchers

Name	Qualification	ECS Position (Rank)	Research Domain
Cláudio Alves	Lic.	BI	Microbiology & Infection
Cristina Amorim Cunha	Lic. Student	Researcher	Microbiology & Infection
Daniela Maria Ramos Pereira	Lic.	BI	Microbiology & Infection
Jenny Carmona	Lic.	BI	Microbiology & Infection
Maria de Belém Marques	Lic.	BI	Microbiology & Infection
Ana Luisa Falcão	Lic.	BI	Neurosciences
Andreia Carvalho	Lic. Student	Researcher	Neurosciences
Carlos Ribeiro	Lic. Student	Researcher	Neurosciences
Hugo Miguel Braga A. Tavares	MD	Assistant	Neurosciences
Irene Melo de Carvalho	Lic. Student	Researcher	Neurosciences
José António Mariz	MD	Assistant	Neurosciences
Luís Abílio de Almeida Torres	Lic. Student	Researcher	Neurosciences
Ricardo Jorge Ferreira Taipa	MD	Assistant	Neurosciences

Rui Manuel F. C. A. Cerqueira	MD	Assistant	Neurosciences
Sandra Fátima F. Martins	MD	Assistant	Neurosciences
Sara Silva	Lic. Student	Researcher	Neurosciences
Tiago Jorge Brito M. Pereira	MD	Assistant	Neurosciences
Cristina Freitas	Lic.	Monitor	Development & Neoplasia
Gustavo Filipe Melo A. Rocha	MD	Assistant	Development & Neoplasia
Maria Fernanda Grillo Milanezi	MD/MSc	Assistant	Development & Neoplasia
Maria Inês da Cunha D. Almeida	Lic.	BI	Development & Neoplasia
Maria Luísa Ferreira	Lic. Student	Researcher	Development & Neoplasia
Olga Martinho	Lic.	Researcher	Development & Neoplasia
Sandra Mónica B. A. Ferreira	Lic.	BTI	Development & Neoplasia
Sérgio Nabais	MD	Assistant	Development & Neoplasia
Susana Nunes	MD	Assistant	Development & Neoplasia

* - finished the thesis during 2007

** - left the ICVS during 2007

*** - the research is distributed by the Microbiology & Infecti on and Neuroscience Domains

**** - Full time Assistant Professor since October 2007

BD = PhD students with a grant from FCT

BI = Research grant from either FCT or projects

BTI = Technical research grant from projects

Lic. = "Licenciatura"

MD = Medical degree

MSc = **Master degree**

MT = Master thesis students

PD = Post-doctoral researcher

I.3 SUPPORT STAFF

Name	Qualification	Position (Rank)	Service
Fernanda Isabel T. M. Santos	PhD	<i>Técnico Superior</i>	Laboratories
Isabel Alexandra M. Dias	Lic.	<i>Veterinária (avença)</i>	Laboratories
Lucília G. Ribeiro Pinto	Lic.	<i>Técnico Superior</i>	Laboratories
Magda João Castelhana Carlos	Lic.	<i>Técnico Superior</i>	Laboratories
Nuno Duarte S: S. Vasconcelos	Lic.	<i>Técnico de Diagnóstico e Terapêutica</i>	Laboratories
Luís Filipe F. Oliveira Martins	Lic.	<i>Técnico Profissional de 2ª classe</i>	Laboratories
Denise Maria Ferreira da Silva	Sec. Education	<i>Técnico Profissional de 2ª classe</i>	Laboratories
José Carlos Teixeira da Rocha	Sec. Education	<i>Técnico Profissional de 2ª classe</i>	Laboratories
António Miguel Oliveira da Mota	B. Education	<i>Auxiliar Técnico</i>	Laboratories
João Filipe A. Malheiro	B. Education	<i>Auxiliar Técnico</i>	Laboratories
Maria Celina F. Barros	Sec. Education	<i>Auxiliar Técnico</i>	Laboratories
Maria Manuela S. Carneiro	B. Education	<i>Auxiliar Técnico</i>	Laboratories
Susana Isabel Vaz Santos	Sec. Education	<i>Auxiliar Técnico</i>	Laboratories
Maria Fernanda C. Fernandes	B. Education	<i>Auxiliar de Manutenção</i>	Laboratories
Ana Lúcia do Valle Fernandes	Lic.	<i>Técnico de 2ª classe</i>	Post-Graduation Office
Carlos Pereira de Brito	Lic.	<i>Bolsa de Gestão de Ciência e Tecnologia</i>	Promotion Office
Maria Paulina D. M. Santos	Lic.	<i>Técnico Superior</i>	Projects Support Office
Domingos Ferreira Dias	Sec. Education	<i>Técnico de Informática Adjunto</i>	Informatics Support

B = Basic

Lic. = "Licenciatura"

Sec. = Secondary

APPENDIX II

Externally Funded Projects

List of the ongoing projects coordinated by ICVS' members (Project PIs) and of those projects where part of the funds were allocated to ICVS researchers.

1. "A multidisciplinary study of invasive fungal infections in immunosuppressed patients: Host susceptibility to fungi versus fungi resistance to drugs"
 Funding agency: Fundação para a Ciência e Tecnologia (FCT)
 Funding for the ICVS team: 44.445 Euros
 Host Institution: ICVS, University of Minho
 Duration: 3 years (2005-2008)
 ICVS/Project PI Fernando Rodrigues
2. "Apoptotic pathway(s) in *Saccharomyces cerevisiae*: proteomic profile and metacaspase-interactive molecules"
 Funding agency: Fundação para a Ciência e Tecnologia (FCT)
 Funding for the ICVS team: 69.500 Euros
 Host Institution: ICVS, Minho University
 Duration: 3 years (2005-2008)
 ICVS/Project PI Paula Ludovico
3. "Uncovering pathological mechanisms underlying juvenile neuronal ceroid lipofuscinoses: from yeast to more complex model systems"
 Funding agency: Fundação para a Ciência e Tecnologia (FCT)
 Funding for the ICVS team: 112.165 Euros
 Host Institution: ICVS, Minho University
 Duration: 3 years (2007-2010)
 ICVS/Project PI Fernando Rodrigues
4. "Role of Interleukin-23 (IL-23) and IL-17 in the regulation of the immune response to the infection by *Mycobacterium tuberculosis*". FCT. 116,000 Euros. Gil
 Funding agency: Fundação para a Ciência e Tecnologia (FCT)
 Funding for the ICVS team: 116.774 Euros
 Host Institution: ICVS, Minho University
 Duration: 3 years (2006-2009)
 ICVS/Project PI António Gil Castro
5. "Evaluation of novel serodiagnostic tests for tuberculosis in Portugal"
 Funding agency: Portuguese Society of Pneumology
 Funding for the ICVS team: 7.500 Euros
 Host Institution: ICVS, Minho University
 Duration: 3 years (2007-2010)
 ICVS/Project PI Margarida Correia-Neves
6. "Biotechnological strategies to treat infectious diseases: intracellular targeting of antibiotics and oligonucleotides using liposomes".
 Funding agency: "Agência de Inovação"
 Funding for the ICVS team: 105.000 Euros
 Host Institution: Bluepharma
 Duration: Duration: 3 years (2004-2007)
 ICVS/Project PI Jorge Pedrosa

7. "Strategies to improve the therapeutic effect of anti-mycobacterial drugs"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 20.876 Euros
Host Institution: INETI
Duration: Duration: 3 years (2005-2007)
ICVS/Project PI Jorge Pedrosa
8. "Zoonotic visceral leishmaniasis: Role of neutrophils and regulatory T cells in parasite persistence and in host immunity"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 18.920 Euros
Host Institution: IHMT/UNL
Duration: 3 years (2005-2008)
ICVS PI: Jorge Pedrosa
9. "Evaluation of the effects of nitrogen supply on yeast cell physiology, transcriptome, proteome and metabolome for optimizing the production of economically important odour and flavour compounds"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 34.780 Euros
Host Institution: UTAD
Duration: Duration: 3 years (2007-2010)
ICVS/Project PI Cecília Leão
10. "The role of choroid plexus proteins in brain inflammation"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 74.223 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2005-2008)
ICVS/Project PI: Joana Almeida Palha
11. "Characterization of the iodine status of Portuguese women in fertile age and its relation with the psychomotor performance of the newborn"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 59.989 Euros
Host Institution: ICVS, University of Minho
Duration: 2005-2008
ICVS/Project PI: Joana Almeida Palha
12. "Vitamins and hormones: linking environment and genes in psychiatric disorders?"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 100.000 Euros
Host Institution: ICVS, University of Minho
Duration: 2 years 2005-2008
ICVS/Project PI: Joana Almeida Palha
13. "The choroid plexus as an immune-sensor for the brain: implications to neurological diseases"
Funding agency: Dana Foundation Program in Neuroimmunology (USA)
Funding for the ICVS team: 145.000 USD
Host Institution: ICVS, University of Minho
Duration: 3 years 2007-2010
ICVS/Project PI: Margarida Correia-Neves and Joana Almeida Palha

14. "Aged and healthy brain: a multidisciplinary neurobiological approach to the aging brain"
Funding agency: Calouste Gulbenkian Foundation (FCG)
Funding for the ICVS team: 105.000 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2005-2008)
ICVS/Project PI: Nuno Sousa
15. "National Programme of standardized patients for teaching, evaluation and clinical certification"
Funding agency: Calouste Gulbenkian Foundation (FCG)
Funding for the ICVS team: 325.000 Euros
Host Institution: ICVS, University of Minho
Duration: Duration: 3 years (2007-2010)
ICVS/Project PI Nuno Sousa
16. "New perspectives in the neurobiology of depression: beyond the "neurochemical hypothesis".
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 96.471 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2007 – 2010)
ICVS/Project PI: Nuno Sousa
17. "Morphometric characterization of steroid hormones effects in the mouse brain"
Funding agency: Bayer Schering Pharma
Funding for the ICVS team: 24.000 Euros
Host Institution: ICVS, University of Minho
Duration: 6 months (2007 – 2008)
ICVS/Project PI: Nuno Sousa
18. Research in the field of "Nuclear Receptors in Developmant and Aging
"Morphometric characterization of steroid hormones effects in the mouse brain"
Funding agency: Max Planck Institute
Funding for the ICVS team: 25.000 Euros
Host Institution: ICVS, University of Minho
Duration: 1 Year (2007 – 2008)
ICVS/Project PI: Nuno Sousa
19. "Study of the role of molecular chaperones and of the ubiquitin-proteasome system in Machado-Joseph disease"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 77.900 Euros
Host Institution: ICVS, University of Minho
Duration: 2005-2008
ICVS/Project PI Patrícia Maciel

20. "Role of neuroinflammation in the pathogenesis and progression of Machado-Joseph disease: study in a mouse model"
 Funding agency: AtaxiaMJD (USA)
 Funding for the ICVS team: 49.467USD
 Host Institution: ICVS, University of Minho
 Duration: 2 years (2006-2008)
 ICVS/Project PI Patrícia Maciel
21. "The role of stress in cortico-basal ganglia loop processing and instrumental conditioning"
 Funding agency: Bial Foundation
 Funding for the ICVS team: 45.000 Euros
 Host Institution: ICVS, University of Minho
 Duration: 2 years (2007-2008)
 ICVS/Project PI Nuno Sousa
22. "Identification of changes in the protein expression of brainstem, hippocampus and amygdala and in associated emotional behaviour induced by different periods of chronic neuropathic pain along ageing"
 Funding agency: Calouste Gulbenkian Foundation (FCG)
 Funding for the ICVS team: 48.615 Euros
 Host Institution: ICVS, University of Minho
 Duration: 3 years (2007-2008)
 ICVS/Project PI Armando Almeida
23. Identification of molecular interactions in the chick "segmentation clock" using the yeast One-hybrid and two hybrid approaches.
 Funding agency: Fundação para a Ciência e Tecnologia (FCT)
 Funding for the ICVS team: 90.000 Euros
 Host Institution: ICVS, University of Minho
 Duration: 3 years (2005 – 2008)
 ICVS/Project PI Isabel Palmeirim
24. Integrating signals in embryogenesis: the case of somitogenesis in the chick
 Funding agency: Fundação para a Ciência e Tecnologia (FCT)
 Funding for the ICVS team: 14 850 Euros
 Host Institution: Fundação da Faculdade de Ciências
 Duration: 3 years (2005 – 2008)
 ICVS/Project PI Isabel Palmeirim
25. Development of endoscopic techniques for transvisceral abdominal surgery
 Funding agency: Portuguese Society of Digestive Endoscopy
 Funding for the ICVS team: 9.000 Euros
 Host Institution: ICVS, University of Minho
 Duration: 2 years (2006-2007)
 ICVS PI: Jorge Correia-Pinto
26. Transvesical approach in third-generation surgery
 Funding agency: Portuguese Society of Urology
 Funding for the ICVS team: 4.000 Euros
 Host Institution: ICVS, University of Minho
 Duration: 2 years (2007-2008)
 ICVS PI: Jorge Correia-Pinto

27. "Mechanisms of Fetal Lung Development and Novel Therapeutic Approaches in Congenital Diaphragmatic Hernia"
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 80.150 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2005-2008)
ICVS/Project PI Jorge Correia-Pinto
28. N-BNP in right ventricular dysfunction in Pediatrics
Funding agency: Portuguese Society of Cardiology
Funding for the ICVS team: 10.000 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2005-2008)
ICVS/Project PI Jorge Correia-Pinto
29. Ghrelin - GH-IGFs role during renal compensating growth after nephrectomy
Funding agency: Portuguese Society of Urology
Funding for the ICVS team: 8.000 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2005-2008)
ICVS/Project PI Jorge Correia-Pinto
30. "O papel dos mediadores inflamatórios dependentes da glicoproteína 130 no desenvolvimento pulmonar fetal e neonatal"
Funding agency: Portuguese Society of Paediatrics
Funding for the ICVS team: 10.000 Euros
Host Institution: ICVS, University of Minho
Duration: 2 years (2007-2008)
ICVS/Project PI Jorge Correia-Pinto
31. The of role gp130-dependent cytokine family during fetal and neonatal lung development
Funding agency: Fundação para a Ciência e Tecnologia (FCT)
Funding for the ICVS team: 9.999 Euros (From 90.000 Euros)
Host Institution: Institute for Molecular Pathology and Immunology, University of Porto
Duration: 3 years (2005-2008)
ICVS/Project PI Joana Paredes
32. "Study of Therapeutic Target c-KIT in Brain Tumours"
Funding agency: Pfizer/Medical Sciences Society of Linbon
Funding for the ICVS team: 60.000 Euros
Host Institution: ICVS, University of Minho
Duration: 3 years (2007-2009)
ICVS/Project PI Rui Manuel Reis

APPENDIX III

Scientific Production

Indicators	Page
International publications	31
National publications	44
International Conferences, Seminars and other Communications	45
Organization of Scientific Meetings and Presence in Scientific Committees	47
Scientific Seminars at the ICVS – “Ciência Falada no ICVS”	47
PhD, Master and other Thesis	50
International Post-graduate Programme	57
Patents and Scientific research prizes	61
International Papers: Journal’s Impact factor and number of papers	62

International Publications (It includes those in press)

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

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14. Autorino R, Lima E: Editorial Comment. *Eur Urol*, *in press*.
15. Autorino R, Osório L, Lima E Rapid Extracorporeal Shock Wave Lithotripsy for Proximal Ureteral Calculi in Colic versus Noncolic Patients. *Eur Urol*, 52:1264-1265 (2007).
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20. Baptista MJ, Clemente F, Rocha G, Areias JC, Guimaraes H, Correia-Pinto J. NT-proBNP as useful tool to evaluate pulmonary hypertension and cardiac function in CDH infants. *Neonatology*, *in press*.
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25. Carvalho A, Marques A, Maciel P and Rodrigues F. Study of disease-relevant polymorphisms in the TLR4 and TLR9 genes: a novel method applied to the analysis of the Portuguese population. *Mol Cell Probes*, 21:316-320 (2007).
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14. Grilo M, Nunes S, Rocha G, Guedes MB, Guimarães H. Adenovirus Infection in the preterm neonate: two cases. 25th Annual Meeting of the European Society for Paediatric Infectious Diseases ESPID, Porto, Portugal (2007).
15. Grilo M, Nunes S, Rocha G, Clemente F, Calado I, Dolores M, Guedes MB, Guimarães H. Neonatal Candidiasis in Intensive Care Unit - 10 years in review. 25th Annual Meeting of the European Society for Paediatric Infectious Diseases ESPID, Porto, Portugal (2007).
16. Jones C, Little SE, Reis JS, Costa B, Wilkins P, Al-Sarraj S, Pearson AJ, Reis RM, Ellison DW, Hargrave DR. Presence of factors predictive of response to anti-EGFR therapy in pediatric high-grade gliomas. *Neuro-oncol* 2: 185 (2007).
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19. Martinho O, Ylstra B, Reis RM. Genomic and transcriptomic profile of glioblastomas with KIT gene amplification. Marie-Curie genome architecture in relation to disease (MC-GARD), Workshop: Array techniques to identify copy number variations, Helsinki, Finland, (2007).
20. Neves AL, Santos M, Henriques-Coelho T, Oliveira SM, Baptista MJ, Areias JC, Correia-Pinto J, Leite-Moreira AF. Ghrelin improves pulmonary hypertension and right ventricular hemodynamics in an infantile model by monocrotaline in a new model of infantile pulmonary hypertension induced by monocrotaline. European Meeting on Hypertension, Milan, Italy (2007).
21. Neves AL, Santos M, Henriques-Coelho T, Oliveira SM, Baptista MJ, Areias JC, Correia-Pinto J, Leite-Moreira AF. Beneficial effects of ghrelin in a new model of infantile pulmonary hypertension induced by monocrotaline. *Cardiol Young*, 17:29 (Suppl 1) (2007).
22. Nunes S, Abreu E, Sá C, Martins M, Cunha I, Pereira A. Beckwith-Wiedemann syndrome: A case report. *J Perinat Med*, 35:227 (Suppl II) (2007).
23. Nunes S, Nogueira-Silva C, Moura RS, Correia-Pinto J. Ghrelin and obestatin: Different role in fetal lung development?. 48th Annual Meeting of the European Society for Paediatric Research, Prague, Czech Republic, (2007).
24. Oliveira IM, Martinho O, Small I, Paiva GR, Souza DM, Olmedo DB, Pinto CE, Faria O, Hainaut P, Reis RM, Ferreira C, Guimarães DP. Correlation between the interferon (IFN) regulated protein GBP-2 and TP53 mutations in squamous cell carcinoma of the esophagus (SCCE). 2nd International Cancer Control Congress, Rio de Janeiro, Brazil, (2007).
25. Pereira MV, Martinho O, Lopes JM, Pimentel J, Reis RM. Study of KIT Oncogene in Medulloblastomas. 10th Cancer Research UK Beatson International Cancer Conference: Molecular Cancer Therapies: New Challenges and Horizons. Glasgow, Scotland, (2007).
26. Pinheiro C, Longatto-Filho A, Ferreira L, Scapulatempo C, AF Alves VAF, Pellerin L, Schmitt FC, Baltazar F. Altered expression of monocarboxylate transporters 1, 2 and 4 in colorectal carcinomas. *Virchows Archiv*, 451 (2):325-325 PP2-116 (2007)
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29. Salgado AJ, Fraga JS, Neves NM, Reis RL, Sousa N. Interactions Between Human Umbilical Cord Perivascular Cells (HUCPVCs) and Neurons/Glial Cells: Role of Conditioned Medium and Direct Cell-to-Cell contact on Cell Viability, Differentiation and Proliferation. TERMIS-NA 2007 Toronto, Canada (2007).
30. Salgado AJ, Fraga JS, Neves NM, Reis RL, Sousa N. Human Umbilical Cord Perivascular Cells (HUCPVCs) as Source of Mesenchymal Progenitors for Central Nervous System Regenerative Medicine: Role of Paracrine Factors and Direct Cell-to-Cell Contacts in Neurons/ Glial Cells Viability, Proliferation and Differentiation. TERMIS-EU 2007, London, England, accepted-podium (2007).
31. Salgado AJ, Sousa RA, Oliveira JT, Silva N, Neves NM, Reis RL, Sousa N. Novel Tissue Engineering 3D Scaffolds for Spinal Cord Injury based on Starch/Polycaprolactone Blends: Development and Preliminary Assessment of Their Biological Performance. TERMIS-EU 2007, London, England, accepted-podium (2007).
32. Sampaio B, Carvalho S, Nunes S Félix L, Antunes H. São Marcos Hospital Paediatrics Department Experience Bacterial Meningitis: 2000-2006. 25th Annual Meeting of the European Society for Paediatric Infectious Diseases ESPID, Porto, Portugal (2007).
33. Santos M, Moura RS, Gonzaga S, Nogueira-Silva C, Ohlmeier S, Correia-Pinto J. Embryonic Essential Myosin Light Chain Regulators Fetal Lung Development in Rats. 38th APSA annual meeting, Orlando, USA (2007).
34. Santos TC, Tuzlakoglu K, Morton T, Lang K, Reise K, Marques AP, Castro AG, Redl H, Reis RL and van Griensven M. In vivo evaluation of the suitability of starch-based scaffolds for bone tissue engineering constructs using Adipose Derived Adult Stem Cells and transgenic mice. Society for Biomaterials Annual Meeting, Chicago, USA (2007).
35. Santos TC, Höring B, Marques AP, Castro AG, Redl H, van Griensven M, Reis RL. 2007. In Vivo Inflammatory/Immune Response Assessment of the Performance of Starch-based Scaffolds. TERMIS NA 2007, Toronto, Canada (2007).
36. Sampaio-Marques B, Rodrigues F, Ludovico P, Leão C. 2007. Survival/Death of *Saccharomyces cerevisiae* stationary phase cells: nutrient effects. 25th Small Meeting on Yeast Transport and Energetics, Bahia, Brazil (2007).
37. Silva-Fernandes A, Costa MC, Costa C, Maciel P. A new transgenic mouse model of Machado-Joseph disease presenting motor impairment and brain pathology. Molecular Mechanisms of Neurodegeneration (3rd Meeting), Milan, Italy (2007).
38. Silva-Fernandes A, Costa C, Oliveira P, Sousa N, Maciel P. Motor impairment and behavioral abnormalities associated with installed spontaneous epilepsy in the FVB/N mouse strain: correlation with neuropathology. 37th Annual Meeting of the Society for Neuroscience, San Diego, USA (2007).
39. Teixeira-Castro A, Maciel P, Morimoto RI. In vivo dynamics of ataxin-3 aggregation in *C. elegans* neurons. International Worm Meeting, California, USA (2007).

National Publications

Papers

1. Lima-Rodrigues M, Valle-Fernandes A, Lamas N, Vieira A, Almeida A, Nunes R. Laringite e outras disfonias: novas hipóteses terapêuticas emergentes da investigação básica. *Clin Inves Otorri*, 1:148-154 (2007).
2. Nogueira-Silva C, Gonçalves, JP. Avaliação da taxa de cobertura vacinal no Centro de Saúde de Braga, nas coortes de nascimento de 1990 a 2005. *Rev Port Clin Geral*, 23:503-518 (2007).
3. Nunes S, Faria MS, Mota C, Maia I, Silva H, Jordão MJ, Costa T, Pereira E. Síndrome do gene contíguo TSC2/PKD1. *Rev Port Nefrol Hipert*, 20:319-326 (2007).
4. Sá MI, Cabral S, Costa PD, Coelho T, Freitas M, Gomes JL. Monitorização electrocardiográfica ambulatória na distrofia miotónica do tipo II. *Rev Port Cardiol*, 26:745-753 (2007).
5. Sá, Cabral S, Costa PD, Coelho T, Freitas M, Torres S, Gomes JL. Envolvimento cardíaco na distrofia miotónica tipo I. *Rev Port Cardiol*, 27:829-840 (2007).

Book Chapters

1. Andrade RP, Palmeirim I. Desenvolvimento embrionário: uma questão de RNA. In: "O Mundo do RNA: Novos desafios e Perspectivas Futuras" (Arraiano CM, Fialho AM Eds.), Lidel-Edições Técnicas, Lda., pp. 141-154 (2007).

Abstracts published in Journal Supplements

1. Neves AL, Rocha G, Carriço A, Baptista MJ, Barreira JL, Vaz T, Guimarães H, Areias JC. Persistência do canal arterial no recém-nascido de muito baixo peso. *Rev Port Cardiol* 6:81(Suppl II) (2007).
2. Baptista MJ, Moreira J, Dias da Silva E, Vieira A, Silva JC, Areias JC. Cateterismo neonatal: do diagnóstico à terapêutica. *Rev Port Cardiol* 6 (Suppl II) (2007).

International Conferences, Seminars and other Communications

1. Almeida B, Buttner S, Ohlmeier S, Silva A, Mesquita A, Sampaio-Marques B, Osório NS, Kollau A, Mayer B, Leão C, Laranjinha J, Rodrigues F, Madeo F and Ludovico P. 2007. "Evidence for NO-mediated apoptosis in yeast". XXIII International Conference on Yeast Genetics and Molecular Biology; Melbourne, Australia (2007)
2. Andrade RP, Palmeirim I. "Thinking Clockwise during Development". International Post-Graduate Course "The dimension of time and gene functioning: focus on the nervous system". Kristineberg Marine Research Station, Sweden (2007).
3. Andrade RP. "Friends at the end: Hairy1 protein interactions in vertebrate embryo segmentation". Cells into Organs - European Network of Excellence, 4th Plenary Meeting, Les Embiez, France (2007).
4. Bajanca F, Palmeirim I. "How is time controlled during embryonic development? Lessons from the chick embryo". European Congress of Human Genetics, Nice, France (2007).
5. Correia-Neves M. Invited to participate in a meeting organized by the World Health Organization in Nairobi, Kenya entitled "2nd International Meeting on the Control of Neglected Zoonoses: integrated control of neglected zoonoses in Africa" (2007).
6. Correia-Neves M. "IL-10 underlies distinct susceptibility of BALB/c and C57BL/6 mice to Mycobacterium avium infection". Division of Immunoregulation, The National Institute for Medical Research, Mill Hill, UK (2007).
7. Correia-Pinto J. "Transvesical access". 1st International NOTES course. Strasbourg, France. Epublication: eats.fr, 2007 Jun;7(6). (URL: <http://www.eats.fr/doi-10.1encorreiapinto001.htm>). (2007).
8. Correia-Pinto J. "Transgastric and transvesical combined approach: Challenges". 1st International NOTES course. Strasbourg, France. Epublication: eats.fr, 2007 Jun;7(6). (URL: <http://www.eats.fr/doi-10.1encorreiapinto002.htm>). (2007).
9. Correia-Pinto J. "In what ways has NOTES evolved since last year's course at IRCAD? ". 2nd International NOTES course. Strasbourg, France. Epublication: WeBSurg.com, 2007 Nov;7(11). URL: <http://www.websurg.com/ref/doi-vd02en2227correiapinto1e.htm>. (2007).
10. Correia-Pinto J. "The Rationale for prenatal growth factor therapy in CDH". American Meeting from CDH Study Group. Houston, USA (2007).
11. Ludovico P. "Molecular Apoptotic Pathways in Yeast". Faculdade de Ciências Farmaceuticas da Universidade de São Paulo, Ribeirão Preto, Brasil (2007)
12. Ludovico P. "Nitric Oxide (NO) as a mediator of Oxidative Stress in Yeast". XXV Small Meeting on Yeast Transport and Energetics, Arraial d'Ajuda, Brasil (2007).
13. Mesquita A, Almeida B, Silva A, Leão C, Rodrigues F, Ludovico P. "Involvement of metabolic status on *Saccharomyces cerevisiae* cell death induced by acid and oxidative stress"; 25th Small Meeting on Yeast Transport and Energetics, Bahia, Brazil (2007).
14. Osório NS, Carvalho A, Almeida AJ, Padilla-Lopez S, Leão C, Laranjinha J, Ludovico P, Pearce DA, Rodrigues F. Arginine related nitric oxide synthesis defect in btn1-?: possible implications for JNCL pathogenesis". 11th International Congress on Neuronal Ceroid Lipofuscinosis (Batten Disease), Rochester, New York; USA (2007)

15. Palmeirim I. "Molecular clocks underlying vertebrate development". Societat Catalana, Girona, Spain (2007).
16. Palmeirim I. "A possible unifying strategy for time control during vertebrate embryonic development". Workshop "Cell and Tissue Morphodynamics: From models to images and back", Oeiras, Portugal (2007).
17. Pascoal S Palmeirim I. "A cellular molecular clock is ticking during proximal-distal limb outgrowth". Society for Integrative and Comparative Biology (SICB) Annual Meeting, Phoenix, USA (2007).
18. Resende TP. "Notochord Signaling Effects on Somite Segmentation". NoE International Post-Graduate Course "Designing the Bodyplan: Developmental Mechanisms", Lorentz Center, University of Leiden, The Netherlands (2007).
19. Reis RM. "Molecular characterization of Portuguese brain tumors". Pediatric Oncology Unit, Institute of Cancer Research. Sutton, UK, (2007).
20. Roque S, Nobrega C, Palha J, Sousa N, Correia-Neves M "Mice chronically infected with *Mycobacterium avium* show no signs of depressive/anxiety-like behaviour". Euron Workshop "Drug treatment of Psychiatric and Neurological Disorders", Bad Honnef, Germany (2007).
21. Salgado AJ, Neves NM, Reis RL, Sousa N. "Adult Stem Cells and Biomaterials in Central Nervous Regenerative Medicine". 2nd Conference in Biotechnology, Lisbon, Portugal (2007).
22. Salgado AJ. "Bone Tissue Engineering: The Essential Elements I". Online ViideoConference Pakistan Higher Comission For Education, Braga, Portugal (2007).
23. Salgado AJ. "Bone Tissue Engineering: The Essential Elements II". Online ViideoConference Pakistan Higher Comission For Education, Braga, Portugal (2007).
24. Salgado AJ. "Extruded Starch Based Scaffolds for Bone Tissue Engineering Applications". Online ViideoConference Pakistan Higher Comission For Education. Braga, Portugal (2007).
25. Salgado AJ. "Adult Stem Cells in Bone and Cartilage Tissue Engineering". Online ViideoConference Pakistan Higher Comission For Education, Braga, Portugal (2007).
26. Salgado AJ, Sousa N. "Possible Application Routes of Biomaterials and Adult Stem Cells in CNS Regeneration". Online ViideoConference Pakistan Higher Comission For Education, Braga, Portugal (2007).
27. Santos N, Correia-Neves M, Almeida V. "Epidemiology of tuberculosis in wild boar from Portugal". Ecology and Management of Wildlife Diseases, York (2007).
28. Sousa N. "Corticosteroid receptors and neuroplasticity" 4th International Meeting "Steroids and Nervous System", Turin, Italy (2007).

Organization of Seminars and Conferences

Organization of Scientific Meetings and Presence in Scientific Committees

- Baltazar F – Co-organizer of the “Reunião de Outono da Associação Portuguesa de Neuro-oncologia”, Braga (2007).
- Baptista MJ – Co-organizer of the “Curso de Cardiologia Pediátrica”, Porto (2007).
- Correia-Pinto J – Organizer of the “Congresso Nacional da Sociedade Portuguesa de Cirurgia Pediátrica”, Braga (2007).
- Costa MJ – Member of the Education Committee of IUBMB (International Union of Biochemistry and Molecular Biology) (2007 – 2010).
- Maciel P. Scientific committee of the “Annual Meeting of the Portuguese Society for Human Genetics” (2007).
- Reis RM – Co-contractor of the “Marie-Curie Action- Genome Architecture in Relation to Disease” (Amsterdam, Helsinki, Madrid, Braga, Edinbrough) (2006-2009).
- Reis RM – Co-organizer of the “Reunião de Outono da Associação Portuguesa de Neuro-oncologia, Braga (2007).

Scientific Seminars at the 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 are invited to present their work.

In 2007, 34 seminars were organized: 18 by PhD students, 3 by Master students, 2 by Post-doc students, 2 by PhD seniors of different research groups and 9 by external invited researchers.

Next, we present a list of these seminars detailing the title of the conference and the speaker.

TALKING ABOUT SCIENCE AT ICVS / 2007

	<i>Researcher & Institution</i>	<i>Title of the Conference</i>
<hr/> January		
9	Bruno Costa, PhD-Student. ICVS – Escola de Ciências da Saúde, UM	"HOXA cluster: a new oncogene group in gliomas?"
16	Belém Marques, BI. ICVS – Escola de Ciências da Saúde, UM.	"High concentration of auxotrophic-complementing amino acids extend yeast chronological life span "
23	Rui Silva, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	"Modulatory interventions in post-natal hippocampal neurogenesis: structural and functional implications "
30	Sérgio Dias, PhD. Centro de Investigação em Patobiologia Molecular, IPO. Lisboa	"VEGF in normal and malignant bone marrow"
<hr/> February		
6	Alexandre do Carmo, PhD. IBMC-UP	"Positional control in T cell activation: how and why surface receptors move in the membrane"
13	Ana João, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	" <i>C. elegans</i> ataxin-3: knockout models and molecular partners"
27	Dina Ruano, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	"Finding Genes Underlying Schizophrenia: Retinoid and Thyroid Hormone Hypotheses"
<hr/> March		
6	Susana Roque, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	"IL-10 production underlies distinct susceptibility of BALB/c and C57BL/6 mice to <i>Mycobacterium avium</i> infection"
13	Andreia Castro, BI. ICVS – Escola de Ciências da Saúde, UM.	" <i>In vivo</i> dynamics of ataxin-3 aggregation <i>Caenorhabditis elegans</i> neurons"
20	Sheeba Franklin, BI. ICVS – Escola de Ciências da Saúde, UM.	"Chick Hair1 protein interacts with SAP18, a component of the SIN3-HDAC transcriptional repressor complex"
27	Andrea Cooper, Ph.D. Trudeau Institute, Inc, Saranac Lake – NY	"IL-12 and tuberculosis: old actors, new play"
<hr/> April		
10	Leonor Gonçalves, Ph.D-Student. ICVS – Escola de Ciências da Saúde, UM.	"Response properties of nociceptive neurons in induced neuropathic rats"
17	Marc Veldhoen, PhD. The National Institute for Medical Research, Mill Hill, London, UK	"Th17: a missing link in the immune system"
24	Sandra Costa, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	"DNA Repair Genetic Polymorphisms: a hope for early detection of Breast Cancer Susceptibility"
<hr/> May		
8	Laurinda Lemos, MD. PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	"Gabapentin associated to Ropivacain block of trigger-points improves pain control and quality of life in Trigeminal Neuralgia patients "
15	Fátima Baltazar, PhD. ICVS – Escola de Ciências da Saúde, UM.	"Metabolism: Achilles heel of tumor cells?"
22	Egídio Torrado, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	"Interaction of <i>Mycobacterium ulcerans</i> with host phagocytes: implications for the nature of the immune response"
29	Guiomar Oliveira, MD. PhD. Hospitais da Universidade de Coimbra.	"Epidemiologia do autismo em Portugal"

<u>June</u>		
5	Maria do Carmo Costa, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“What is ataxin-3 doing in muscle?”
12	Vitor Costa, PhD. IBMC - ICBAS, Universidade do Porto	“Oxidative stress, sphingolipid signalling and ageing in <i>Saccharomyces cerevisiae</i> ”
19	Rute Moura, Pos-Doc. ICVS – Escola de Ciências da Saúde, UM.	“Cycling genes and lung development”
<u>September</u>		
4	Agostinho Carvalho, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“The T-1237C polymorphism of TLR9 increases the susceptibility to non-Hodgkin lymphoma and acute myeloid leukemia ”
18	Jack Neefjes, PhD. Division of Tumor Biology, The Netherlands Cancer Institute, Plesmanlaan Amsterdam, The Netherlands	“Work developed in the laboratory of Jack´s Neefjes”
25	Adelino Leite-Moreira MD, PhD. Faculdade de Medicina da Universidade do Porto	“Pathophysiology of heart failure”
<u>October</u>		
2	Carla Rolanda, MD. PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“N.O.T.E.S. from the gastroscope view”
23	Eduardo Ferreira, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“Stressing out Decisions”
30	Maria Duarte, Pos-Doc. ICVS – Escola de Ciências da Saúde, UM.	“Dynamics of Hes1 Expression in Prostate Cancer”
<u>November</u>		
6	Nuno Osório, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“Pathology underlying Batten disease: first steps towards transposing findings in yeast to more complex models”
13	Bruno Almeida, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“Evolutionary conservation of GAPDH dual function ”
27	Céline Pinheiro, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“Monocarboxylate transporters as potential targets for cancer therapy”
<u>December</u>		
4	Chris Jones, PhD. Pediatric Molecular Pathology Institute of Cancer Research, London, UK	“The many roles of the IGF-1 receptor in childhood cancer”
4	Mónica Santos, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“Pathogenesis of Rett syndrome: role of the MeCP2 protein in neuronal function ”
11	Joana Palha, PhD. ICVS – Escola de Ciências da Saúde, UM.	“Advances on the choroid plexus function as a communicator for the brain”
18	Tatiana Resende, PhD-Student. ICVS – Escola de Ciências da Saúde, UM.	“Requirement of notochord for timely somite segmentation”

PhD, Master and other Thesis

Thesis Concluded in 2007:

In 2007, 6 PhD theses and 2 Master theses supervised by ICVS researchers were concluded.

1. Agostinho Almeida. "Cellular and molecular studies on the dimorphic pathogenic fungus *Paracoccidioides brasiliensis*". PhD Degree Thesis in Biological and Biomedical Sciences, School of Health Sciences, University of Minho. Supervisor: Fernando Rodrigues (2007).
2. Andrea Cruz. "Understanding BCG vaccination: implications for the design of new preventive strategies against mycobacteriosis". PhD Degree Thesis in Biological and Biomedical Sciences, School of Health Sciences, University of Minho. Supervisor: Gil Castro (2007).
3. Egidio Torrado. "Cellular immune response to experimental infections with mycobacteria with different degrees of virulence: development of new preventive strategies". PhD Degree Thesis in Biological and Biomedical Sciences, School of Health Sciences, University of Minho. Supervisor: Jorge Pedrosa (2007).
4. José Miguel Pêgo. "Influence of stress in the structure and function of the amygdala". PhD Degree Thesis in Biological and Biomedical Sciences, School of Health Sciences, University of Minho. Supervisor: Nuno Sousa (2007).
5. Nuno Santos. "The prevalence of tuberculosis in wild-ungulates in Portugal". Master program in "Public Health" from the Veterinary Faculty, Universidade Técnica de Lisboa, Portugal. Co-supervisor: Margarida Correia-Neves (2007).
6. Rui Silva. "Modulatory interventions in postnatal hippocampal neurogenesis: structural and functional implications". PhD Degree Thesis in Biological and Biomedical Sciences, School of Health Sciences, University of Minho. Supervisor: Nuno Sousa (2007).
7. Sandra Costa. "DNA repair genetic polymorphisms and breast cancer in Portuguese population". PhD Degree Thesis in Biological and Biomedical Sciences, School of Health Science School (ECS), University of Minho. Supervisor: Fernando Schmitt (2007).
8. Susana Roque. "T cell manipulation of Interleukin-10 activity to improve the efficacy of antimycobacterial therapy". Master program in "Clinical Immunology" from the University of Beira Interior, Covilhã, Portugal. Supervisor: Margarida Correia-Neves (2007).

Thesis Under Development:

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

- 44 PhD theses, 41 of which are registered at the ICVS
- 6 Master theses

A detailed list, comprising PhD, Master and other graduated Students with information on Themes and Supervisors is presented below.

PhD and Master Students: Thesis, Themes and Supervisors

RESEARCH AREA	POSITION	STUDENT	SUPERVISOR(S)	THESIS THEME
Microbiology and Infection	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
	MT	Barbosa, Matilde	Paula Ludovico (ICVS)	Oxidative stress resistance mechanisms of <i>Candida Krusei</i>
	PhD (BD)	Carvalho, Agostinho	Fernando Rodrigues Patrícia Maciel (ICVS)	Susceptibility of immunosuppressed patients to invasive fungal infections: analysis of molecular factors
	PhD (BD)	Coelho, Maria Rosinda	António Gil Castro (ICVS), Jorge Pedrosa (ICVS)	Understanding BCG infection/vaccination: role of IFN- γ and IL-17
	MT	Ferreira, Carina	Margarida Correia-Neves (ICVS)	Search for mycobacteria in organs like the thymus and spleen
	PhD (BD)	Fraga, Alexandra	Jorge Pedrosa (ICVS)	Understanding <i>Buruli ulcer</i> : elucidation of the cellular and molecular mechanisms underlying infection with <i>Mycobacterium ulcerans</i>
	PhD (BD)	Martins, Teresa	(ICVS),	Host-pathogen interactions and implications for the development of strategies against mycobacterium ulcerans infections
	PhD (BD)	Mesquita, Ana	Paula Ludovico (ICVS), Fernando Rodrigues (ICVS)	New insights into “old” glycolytic proteins: Their putative role on <i>Saccharomyces cerevisiae</i> active cell death
	PhD(BD)	Nóbrega, Cláudia	Margarida Correia-Neves (ICVS)	Thymus infection by mycobacteria: consequences for the immune response and chemotherapy
	PhD (BD)	Osório, Nunc	Fernando Rodrigues (ICVS) David Pearce (Univ. Rochester-USA)	Yeast models of neuronal ceroid lipofuscinosis: From different genes to common biological features
	MT	Pereira, Sandra	Fernando Rodrigues (ICVS)	A comparative study of multiplex-PCR and culturing methods for early detection of candidemia in patients of the intensive care unit
	PhD (BD)	Silva, Alexandra	Paula Ludovico (ICVS), Elsa Logarinho (ICVS)	Translational regulation of programmed cell death in <i>Saccharomyces cerevisiae</i> , a model in programmed cell death research

Neurosciences	PhD	Bessa-Peixoto, João	Nuno Sousa (ICVS)	Interaction between anxiety and depression in animal models of behaviour: insights on neuroplasticity and cognitive function
	MD/PhD	Carvalho, Ana	Nuno Sousa (ICVS)	Stress and cognition
	PhD	Castro, Andreia	Patrícia Maciel (ICVS)	Study of the misfolding response in animal models of Machado-Joseph disease
	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 (BD)	Costa, M ^a 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	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 (BD)	Fernandes, Anabela	Patrícia Maciel (ICVS)	Characterization of transgenic mice for Machado-Joseph disease
	PhD	Fernandes, Fausto (MD)	Nuno Sousa (ICVS)	Síndrome de Apneia obstrutiva do sono na criança-influência da hipertrofia de amígdalas e vegetações adenóides
	PhD (BD) (UC)	Ferreira, Eduardo	Nuno Sousa (ICVS)	The role of stress in cortico-basal ganglia loop processing and instrumental conditioning
	MT	Fraga, Joana*	Nuno Sousa (ICVS) António Salgado (ICVS)	Study on human umbilical cord perivascular stem cells (HUCPVCs) with glial cells/neurons interactions via gap junction intercellular communication
	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	Leão, Pedro	Nuno Sousa (ICVS)	Implications of prenatal exposure to corticosteroids in the mesolimbic reward pathway
	PhD (BD)	Leite-Almeida, Hugo	Armando Almeida (ICVS) Nuno Sousa (ICVS)	Role of the medullary dorsal reticular nucleus in the modulation of chronic pain

	PhD	Lemos, Laurinda (MD)	Armando Almeida (ICVS) Teresa McIntyre (IEP -UM)	New therapies for the treatment of trigeminal neuralgia
	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, Máric (MD)	Nuno Sousa (ICVS)	Maternal dexamethasone treatment: neurodevelopmental consequences
	MD/PhD	Oliveira, Tiago	Nuno Sousa (ICVS)	Intracellular vesicle trafficking
	PhD	Patchev, Alexander (MD)	Nuno Sousa (ICVS)	Differential effects of estrogen receptor isoforms during sex - specific brain organization of the rat
	PhD	Pinto-Ribeiro, Filipa	Armando Almeida (ICVS) Nuno Sousa (ICVS)	Anatomical and functional basis for the interaction between stress and chronic (neuropathic) pain
	PhD (BD)	Rodrigues, Ana João	Patrícia Maciel (ICVS)	Cellular and physiological changes associated with absence of Josephin: study in <i>C. elegans</i>
	PhD	Rodrigues, Manuel Lima (MD)	Armando Almeida (ICVS) Rui Nunes (UP)	Sensorimotor innervation of the rat larynx
	PhD	Roque, Susana	Margarida Correia-Neves (ICVS) Joana Palha (ICVS)	The role of peripheral chronic infection in the development of infection and/or anxiety-like behaviors
	PhD (BD) (UP)	Santos, Mónica*	Patrícia Maciel (ICVS)	Study of the pathogenesis of Rett Syndrome and the role of protein MeCP2 in neuronal function
Development & Neoplasia	PhD (BD)	Albergaria, André	Fernando Schmitt (IPATIMUP/ICVS)	The role of forkhead transcription factors FOXA1 and FOXM1 in endocrine resistance of breast cancer
	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
	PhD (BD)	Costa, Brunc	Rui M. Reis (ICVS)	Brain tumors: molecular profiling and alterations related to therapy response

PhD (BD)	Franklin, Sheeba	Isabel Palmeirim (ICVS)	Study of new genes involved in the molecular clock underlying embryo segmentation
PhD (FMUP-UP)	Henriques-Coelho, Tiago	Adelino Leite-Moreira (FMUP) Jorge Correia-Pinto (ICVS)	Cellular and neurohumoral regulation of pulmonary growth and hypertension: Pathophysiological implications
PhD (BD)	Gonzaga, Sílvia	Jorge Correia-Pinto (ICVSM) Alan W Flake (Univ. Pennsylvania)	Fetal lung development and new therapeutically approaches in congenital diaphragmatic hernia
PhD	Lima, Estêvão	Jorge Correia-Pinto (ICVS) José la Fuente (ICBAS)	Development of novel techniques for intra-abdominal scarless surgery
PhD	Nogueira-Silva, Cristina (MD)	Jorge Correia-Pinto (ICVS) Isabel Palmeirim (ICVS)	Looking for novel physiological regulators of lung development
PhD	Pereira, Marta	Rui M. Reis (ICVS)	Study of New Potential Molecular Targets for Pediatric Brain Tumors Therapy
PhD (BD)	Pinheiro, Céline	Fátima Baltazar (ICVS)	Role of monocarboxylate transporters in solid tumors
PhD (BD)	Resende, Tatiana	Isabel Palmeirim (ICVS)	Study of protein interactions in the vertebrate segmentation clock
PhD Stud	Rolanda, Carla	Jorge Correia-Pinto (ICVS)	Natural Orifices Transluminal Endoscopic Surgery
PhD (BD)	Silva, Liliana	Isabel Palmeirim (ICVS) Martin Catala (Univ. Paris)	Control of the anteroposterior patterning of axis and the somitogenesis processes
MT	Tibúrcio, Marta	Adhemar Longatto (ICVS)	Role of thrombin/FGF crosstalk on tumor proliferation: na in vitro approach

* successfully finished during 2007

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

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

MT = Master students (thesis research work)

ICVS = Life and Health Research Institute

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

UM = University of Minho

UP = University of Porto.

Other Research Students: Themes and Supervisors

RESEARCH AREA	POSITION	STUDENT	SUPERVISOR(S)	THESIS THEME
Microbiology and Infection	BI	Cunha, Cristina	Fernando Rodrigues (ICVS)	Mutations in immunesystem genes associated to fungal infections susceptibility
	BI	Marques, Belém	Fernando Rodrigues (ICVS)	Celular and molecular mycology: epidemiology of systemic mycoses and evaluation of risk factors
	UGS	Carvalho, Liliana	Margarida Correia-Neves (ICVS)	New tools for research using animal models for mycobacterial infections
	BI	Alves, Cláudio	Margarida Correia-Neves (ICVS)	T cells differentiation during mycobacterial infection
	BI	Jenny Andrea Carmona	Jorge Pedrosa (ICVS)	Virulence of clinical isolates of mycobacteria and implications for infection outcome
	BI	Pereira, Daniela	Jorge Pedrosa (ICVS)	Biotechnological strategies for the treatment of infection diseases: liposomes as carriers
	UGS	Teixeira, Marisa	António Gil Castro (ICVS)	Role of IL-23 and IL-17 in the control of infection by mycobacteria
	UGS	Martins, Teresa	Jorge Pedrosa (ICVS)	Host- Pathogen interactions and implications for the development of strategies against mycobacterium ulcerans infections
	UGS	Sousa, Carol	António Gil Castro (ICVS)	Dynamics of Th1, Th17 and Reg T cells following infection by <i>Listeria monocytogenes</i>
Neurosciences	Assist.	Cerqueira, Rui (MD)	Nuno Sousa (ICVS)	Impact of exercise and growth factors in cortical synaptic contacts
	BI	Falcão, Ana Luísa	João Sousa (ICVS)	Study of the role of the choroid plexus in inflammation and diseases of the central nervous system
	Res	Fraga, Joana	Nuno Sousa/António Salgado (ICVS)	Interactions between human umbilical cord mesenchymal progenitors with neurons/glia: role of direct contact in cell viability, proliferation and differentiation
	UGS	Lamas, Nunc	Armando Almeida (ICVS)	Interaction between the immune and nervous systems at the laryngeal mucosa
	Assist.	Leão, Pedro	Nuno Sousa (ICVS)	The ventral striatum system following chronic stress
	Assist	Martins, Sandra	Nuno Sousa (ICVS)	The role of IL-10 in inflammatory bowel disease
	Res.	Melo, Irene	Nuno Sousa (ICVS)	Apoptotic pathway activation in prenatal stress

	Mon	Morgado, Pedro	Nuno Sousa (ICVS)	Synaptic plasticity in the prefrontal cortex: behavioural implications
	Assist.	Oliveira, Márcio (MD)	Nuno Sousa (ICVS)	Maternal dexamethasone treatment: neurodevelopmental consequences
	Assist.	Taipa, Ricardo (MD)	Nuno Sousa (ICVS)	Dynamic interplays between memory systems: the role of striatum
	UGS	Ribeiro, Carlos	Nuno Sousa/António Salgado (ICVS)	Interactions Between Mesenchymal Like Adult Stem Cells and Hippocampal Neurons/Glial Cells: Role of Paracrine Factors and Cell-to-Cell Contact in Cell Viability, Proliferation and Differentiation
	Assist.	Tavares, Hugo (MD)	Nuno Sousa & Patrícia Maciel (ICVS)	Febrile convulsions: implications in neurodevelopment
	UGS	Torres, Luís	Armando Almeida (ICVS)	Glial changes in the nervous system induced by chronic pain with ageing
<hr/>				
Development & Neoplasia	BTI	Ferreira, Mónica	Isabel Palmeirim (ICVS)	Development of new laboratory techniques applied to the study of chick embryo development
	Mon.	Freitas, Cristina	Jorge Correia Pinto (ICVS)	src pathway and lung development
	Assist.	Melo-Rocha, Gustavo (MD)	Jorge Correia Pinto (ICVS)	Cardiac calcium kinetics-related proteins in the pregnant rat
	Assist.	Nabais, Sérgio	Jorge Correia Pinto (ICVS)	Miocardial overload and WNT pathway
	Assist.	Nunes, Susana	Jorge Correia Pinto (ICVS)	Ghrelin and <i>in vitro</i> lung development
	Res.	Pereira, Marta	Rui M. Reis (ICVS)	Analysis of MGMT in Gliomas
	BI	Resende, Tatiana	Isabel Palmeirim (ICVS)	Estudo de interações proteicas envolvendo a maquinaria molecular do relógio da segmentação de embriões vertebrados

Assist. – ECS Assistant

BI – Research grant from either FCT or projects

BTI – Technical research grant from projects

Mon – ECS Monitor

Res – Researcher without institutional grant

ICVS – Life and Health Research Institute

UGS – Undergraduate student

International Post-graduate Programme

Scientific Content and Structure

In 2007, and for the seventh consecutive year, we offered a highly specialized training for medical doctors and investigators in biomedical sciences. To run this programme, we obtained financial support from “Fundação Calouste Gulbenkian” and “Fundação Luso-Americana” as well as from several companies: Bioportugal, Bio-Rad, Bonsai Technologies, Delta Cafés, Dias de Sousa S.A., ENZIfarma, Frilabo, Fujifilm Lifescience, INOPAT, Olympus, Reagente 5, Roche, Sarstedt, Tadinense and VWR International. We are grateful to our sponsors for the helpful contribution for this international program of courses and workshops in biomedical sciences.

The 2007 post-graduation programme included nine courses and four workshops, listed below, and counted with 257 participants. In 2007 the number of courses and workshops was smaller than in previous years given the space and organizational constraints imposed by the move of the School facilities to a new building in August.

Detailed information of the programme (courses and workshops) is available at (<http://www.ecsaude.uminho.pt/postgrad>).

Courses in Biomedical Sciences

Hospital Pharmacy and Therapeutics Committees

Coordinators: Fátima Baltazar, António Sarmento
27-28 April

Bioinformatics

Coordinators: Paula Ludovico, António Gil Castro, Jorge Carneiro
2-4 May

Animal Cell and Tissue Culture

Coordinators: Fernanda Bajanca, Isabel Palmeirim, Gabriela Rodrigues, Ana I. Moura Santos
16-18 May

Neurosurgery “Cerebral Sulci, Gyri and Ventricles”, 4th Edition

Coordinators: Evandro de Oliveira, Carlos Alegria, Nuno Sousa
11-15 June

New perspectives in Anxiety and Depression: From Laboratory to the Clinics

Coordinators: Joana Palha, Nuno Sousa, Óscar Gonçalves
28-30 June

Laboratory Animal Science

Coordinators: Jorge Pedrosa, Patrícia Maciel and Magda Carlos
3-14 September

Applied Epidemiology

Coordinators: Mário Freitas, Jaime Correia de Sousa, Yonah Yaphe
15-24 October
(Cancelled)

Invasive Infections by *Aspergillus spp*

Coordinators: Fernando Rodrigues, António Sarmento, Luigina Romani

21-23 November

Minimally Invasive Surgical Week: Laparoscopy, Endoscopy and 3rd Generation Surgery

Coordinators: Jorge Correia-Pinto, Estevão Lima, José L. Carvalho, Guilherme Macedo

3-7 December

Workshops**Basic Training on Multiple Choice Testing**

Coordinators: Manuel João Costa

31 January

The Nematode *C. elegans*: a model for Teaching and Research in Biology

Coordinators: Patrícia Maciel

21-24 March

(Cancelled)

Assessment Methodologies in Occupational Health

Coordinators: António Alegre Sarmento, Mário Freitas

1-3 October

(Cancelled)

Assessment of Medical Competence

Coordinators: Manuel João Costa and Lambert Schuwirth

13-14 December

(Cancelled)

Global evaluation

In 2007 the International Postgraduate Programme included novel courses in diverse scientific areas and also new editions of the courses “Laboratory Animal Science” and “Neurosurgery: Cerebral Sulci, Gyri and Ventricles”, that had been very successful in previous years and that continue to represent areas of demand among the participants. In particular, for the third consecutive year we offered the training on “Laboratory Animal Science”, which provides international certification for research using animal models. For the fourth time the course “Neurosurgery: Cerebral Sulci, Gyri and Ventricles” took place reinforcing the relevance of the new laboratory of neurosurgery for advanced training in the new facilities. Among the multiplicity of courses and workshops offered we would like to highlight the course “Minimally Invasive Surgical Week: Laparoscopy, Endoscopy and 3rd Generation Surgery” that took place in the new ECS/ICVS facilities and allowed the specialized training of medical doctors on the third generation surgery, a novel and emerging area on surgery. The workshop “Basic Training on Multiple Choice Testing” was also very successful. The school was contacted by “Instituto de Ciências Biomédicas Abel Salazar/Hospital Geral de Santo António (ICBAS/HGSA) and a second edition of this workshop took place during 2007 in ICBAS/HGSA.

Unfortunately, for different reasons, one course, “Applied Epidemiology”, and three workshops, “The nematode *C. elegans*: a Model for Teaching and Research in Biology”, “Assessment Methodologies in Occupational Health” and “Assessment of Medical Competence” were cancelled.

The main goal of the International Postgraduate Programme is to offer a highly specialized training for medical doctors and investigators in biomedical sciences as well as to improve and promote the medical education an emergent research area that aims to improve individual’s abilities to teach. Therefore, we pretend to continue offering training in multiple areas by organizing novel courses every year, but also by promoting additional editions of courses for which the demand is evident.

Participants Background

In 2007 the International Postgraduate Programme counted with 257 participants, a lower level of participation when compared to 2006 that is probably related to the lower number of courses and workshops offered in 2007. Figure 1 presents the participant’s background distribution in 2007. It is grateful to realize that the program attracted a considerable number of clinicians, which we intend to promote further.

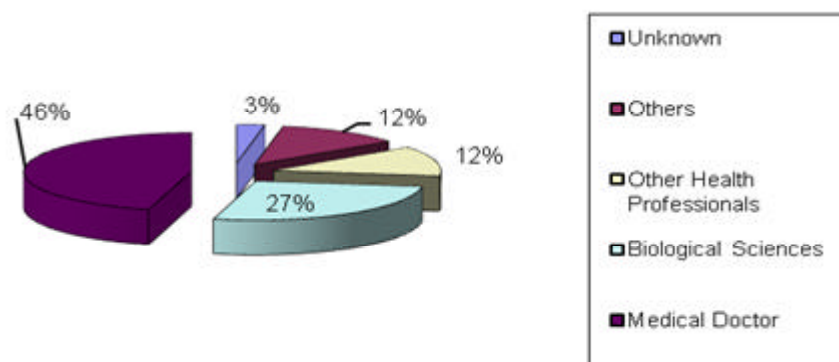


Figure 1 - Background distribution of the participants (“Unknown” reflects the number of questionnaires in which the participant’s background was not provided; “Others Health Professionals” include participants having as background pharmacy, psychology or clinical analysis and public health; “Others” include participants having as background polymer, biotechnological, biological, food technology or chemical engineering).

The participants belong to different national and international institutions as presented in Figure 2.

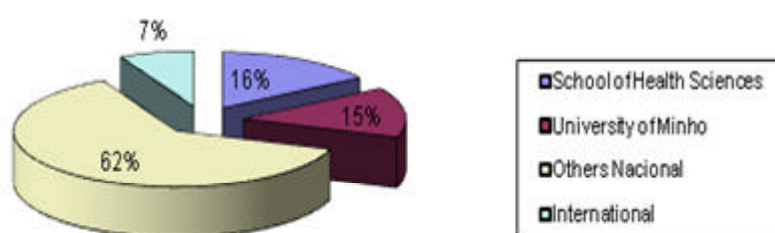


Figure 2 – Participants affiliation.

The vast majority of the participants originate from Portuguese Institutions other than the University of Minho, which is very representative of the growing acceptance of our programme in the national biomedical research and medical communities. Our programme counted with participants from international institutions, particularly in the courses “Neurosurgery: Cerebral Sulci, Gyri and Ventricles”, “New Perspectives in Anxiety and Depression: From Laboratory to Clinics” and “Minimally Invasive Surgical Week: Laparoscopy, Endoscopy and 3rd Generation Surgery”, which further reinforces the international recognition of our programme.

Evaluation results

A questionnaire was filled by 209 out of 257 participants to evaluate several aspects of each course or workshop. The overall evaluation provided the results presented in Figure 3: excellent (37%), Very good (52%), Good (11%), Fair (0%), Poor (0%).

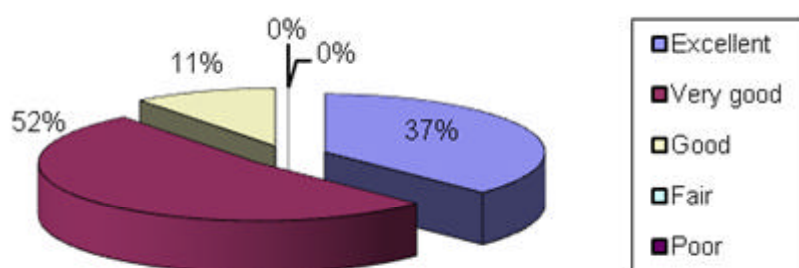


Figure 3 – Evaluation results.

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

Patents and Scientific Research Prizes

Patents

- Vilaça J, Pinho AM, Fonseca J, Peixinho N, Correia-Pinto J “System for automatic and personalized pre-bending of surgical bars applied in correction of Pectus Excavatum based on thoracic CT Scan. Portuguese patent nº 103824

Scientific Research Prizes

Internal ICVS Prizes

- Annual Prize to the ICVS Research Domain that published the paper in the International Journal with highest IF: “Microbiology and Infection”; PLoS Med, IF= 13.75
- Annual Prize to the ICVS Domain with the highest Total IF per PhD member: “Neurosciences”; Total IF= 9.79

External Prizes

In 2007, the seven prizes listed below were awarded to researchers of the ICVS.

“Prémio Sanofi-Aventis em Cardiologia”, with the study “A imunomodulação pela timulina reverte a hipertensão pulmonar induzida pela monocrotalina”, by Oliveira SM, Henriques-Coelho T, Carvalho LF, Santos M, Roncon-albuquerque R, Neves L, Moura R, Correia-Pinto J, Leite-Moreira AF (2007).

“Prémio Servier na Insuficiência Cardíaca”, with the study “Insuficiência cardíaca esquerda num modelo experimental de sobrecarga selectiva do ventrículo direito”, by Carvalho LF, Lourenço A, Roncon-albuquerque R, Brás-Silva C, Faria B, Wieland B, Henriques-Coelho T, Correia-Pinto J, Leite-Moreira AF (2007).

“Prémio SBBQ (Sociedade Brasileira de Bioquímica e Biologia Molecular)” for the poster “Learning hormone action mechanisms with bioinformatics”, by Sousa JC, Costa MJ, Palha JA, presented at the XXXVI SBBQ/ IUBMB Annual Meeting, Bahia, Brasil (2007).

“Prémio Sociedade Portuguesa de Cardiologia/Fundação Astrazeneca”, with the study “Myocardial dysfunction and neuro-humoral activation without remodeling in the left ventricle of monocrotaline-induced pulmonary hypertensive rats”, by Lourenço AP, Roncon-albuquerque R, Brás-Silva C, Faria B, Wieland B, Henriques-Coelho T, Correia-Pinto J, Leite-Moreira AF (2007).

“Olympus Award for Best Overall Paper in the World Congress of Endo-Urology”, with the study “Third generation nephrectomy by natural orifices transluminal endoscopic surgery”, by Lima E, Rolanda C, Pêgo JM, Henriques-Coelho T, Silva D, Osório L, Moreira I, Carvalho JL, Correia-Pinto J (2007).

“Prémio Comissão Fomento Investigação Cuidados Saúde Ministério Saúde” with the study “NT-proBNP: valor em Pediatria”, by Baptista MJ, Areias JC, Correia-Pinto J (2007).

“Menção Honrosa do Prémio Ricardo Jorge de Saúde Pública” with the study “O efeito da actividade da interleucina 10 em infecções por Mycobacterium avium é dependente do fundo genético do hospedeiro”, by Roque S, Nóbrega C, Appelberg R, Correia-Neves M (2007).

International Papers: Journal's Impact factor (IF) and number (n).

JOURNAL	IF	n
<i>PLoS Med</i>	13.75	1
<i>Mol Psychiatr</i>	11.80	1
<i>Stem Cells</i>	7.92	1
<i>Development</i>	7.76	1
<i>J Neurosci</i>	7.45	1
<i>Bioch Bioph Acta – Mol Cell Res</i>	6.90	2
<i>FASEB J</i>	6.72	1
<i>Oncogene</i>	6.58	1
<i>Mol Biol Cell</i>	6.56	4
<i>J Cell Sci</i>	6.43	1
<i>Cereb Cortex</i>	6.37	1
<i>J Immunol</i>	6.29	2
<i>Clin Cancer Res</i>	6.18	2
<i>Mol Ther</i>	5.84	1
<i>Neurology</i>	5.69	1
<i>Am J Gastroenterol</i>	5.61	1
<i>Neurobiol Aging</i>	5.60	2
<i>Brain Res Rev</i>	5.60	1
<i>J Infect Dis</i>	5.36	1
<i>Mol Cancer Ther</i>	5.14	1
<i>J Mol Biol</i>	4.89	1
<i>Eur Urol</i>	4.85	2
<i>J Cereb Blood Flow Metab</i>	4.84	1
<i>Gastrointest Endosc</i>	4.83	2
<i>Breast Canc Res Treat</i>	4.67	1
<i>Am J Respir Cell Mol Biol</i>	4.59	1
<i>Am J Med Genet B</i>	4.46	2
<i>Genes Brain Behav</i>	4.39	1
<i>Curr. Topics Med. Chem</i>	4.17	1
<i>Exp Neurol</i>	4.16	1
<i>Breast Cance Res</i>	4.16	1
<i>BMC Genomics</i>	4.03	1
<i>Infect Immun</i>	4.00	2
<i>J Urol</i>	3.96	1
<i>Mech Ageing Dev</i>	3.85	1

<i>Exp Cell Res</i>	3.78	2
<i>Eur J Neurosci</i>	3.71	1
<i>J Psychiatr Res</i>	3.70	3
<i>Eur J Hum Genet</i>	3.70	1
<i>Neurobiol Learn Mem</i>	3.59	1
<i>Int J Devel Biol</i>	3.58	2
<i>BMC Dev Biol</i>	3.51	1
<i>Neuroscience</i>	3.43	2
<i>Cancer Lett</i>	3.28	1
<i>Microbiology – SGM</i>	3.14	2
<i>Microbes Infect</i>	3.13	1
<i>Fungal Genet Biol</i>	3.12	2
<i>Cell Oncol</i>	2.98	2
<i>Am J Clin Pathol</i>	2.94	1
<i>Synapse</i>	2.87	1
<i>Biochem Biophys Res Commun</i>	2.86	1
<i>Brain Cogn</i>	2.86	1
<i>J Biotechnol</i>	2.60	1
<i>J Cancer Res Clin Oncol</i>	2.47	1
<i>Clin J Pain</i>	2.45	1
<i>Integr Comp Biol</i>	2.44	1
<i>Sci Total Environ</i>	2.36	1
<i>Brain Res</i>	2.34	1
<i>Gynecol Oncol</i>	2.32	1
<i>FEMS Yeast Res</i>	2.27	2
<i>Virchows Arch</i>	2.25	3
<i>J Clin Pathol</i>	2.25	2
<i>J Neurosurg</i>	2.24	1
<i>J Neurosci Methods</i>	2.24	1
<i>Int. J. Antimicrob. Agents</i>	2.21	1
<i>Int J Gynec Pathol</i>	2.18	1
<i>Urology</i>	2.13	1
<i>Neurosci Lett</i>	2.09	1
<i>Mol Cell Probes</i>	2.02	1
<i>Med Mycol</i>	2.01	1
<i>Paras Immunol</i>	2.01	1
<i>Horm Metab Res</i>	2.00	1

<i>Basic Clin Pharmacol Toxicol</i>	1.79	1
<i>Laryngoscope</i>	1.74	1
<i>Appl Immunohistoch Mol Morphol</i>	1.62	1
<i>Vet J</i>	1.59	1
<i>Oncol Reports</i>	1.57	1
<i>J Endourol</i>	1.54	1
<i>Cancer Genet Cytogenet</i>	1.54	1
<i>Anticancer Res</i>	1.48	1
<i>Int J STD & AIDS</i>	1.27	1
<i>Eur J Obstet Gynecol Reprod Biol</i>	1.27	1
<i>J Pediatr Surg</i>	1.11	2
<i>Exp Parasitol</i>	1.11	1
<i>Microsurgery</i>	0.88	1
<i>Acta Cytol</i>	0.79	2
<i>Diagn Cytopathol</i>	0.79	3
<i>Fetal Diagn Ther</i>	0.76	1
<i>Exp Toxicol Pathol</i>	0.76	1
<i>J Chem Educ</i>	0.44	1
<i>Mult Scler</i>	0.39	1
<i>Biochem Mol Biol Educ</i>	0.37	1
<i>PLoS Negl Trop Dis</i>		1
<i>Mol Meth Biol</i>		1
<i>Neonatology</i>		1
<i>Birth Defects Res C Embryo Today</i>		1
<i>Eur J Surg Oncol</i>		1
<i>ASBMB Today</i>		2
<i>Appl Cancer Res</i>		1
<i>J Bras Patol</i>		2
<i>Surg Endosc</i>		1
<i>Curr Urol Rep</i>		1
<i>PLoS One</i>		1
<i>J Low Genit Tract Dis</i>		1
<i>World J Surg Oncol</i>		1
<i>Appl Environ Microbiol</i>		2
<i>Minerva Med</i>		1
TOTAL		136

n – number of papers published including those *in press* in 2007

Impact Factors of 2006, according to Journal Citation Reports

APPENDIX IV

Initiatives in Science & Society

Initiatives in Science & Society

- Andrade RP. "A new life begins..." - Clarification session on human embryo development, in the context of the upcoming National Referendum on Abortion, Braga Baptist Church, Portugal.
- Andrade RP. "Scientists for a day" - Experimental activity for kindergarten children (3 - 5 years), Jardim de Infância de S. Lázaro, Braga, Portugal
- Correia-Neves M. Invited to participate as a specialist in immunology during the initiative DECIDE (<http://www.playdecide.org/>), about "Xenotransplants" in Viana do Castelo (November 24th 2007). The initiative DECIDE is a game, played all over Europe, which aims at promoting discussion and information about particular subjects of live science.
- Costa MJ. Curator for the cycle on education on the Cycle of International Conferences "Critique of the contemporary", Fundação Serralves. Portugal.
- Palmeirim I. Organization of "Portas Abertas" during the "Science and Technology week". School of Health Sciences, University of Minho (2007).
- Palmeirim I. Scientific promotion entrevista at program "Geração Cientista" at RTP2 TV station (10-03-07);
- Palmeirim I. Colaboration with the "Bogalha School" in a Science & Society project directed to young students (ages ranging from 6 to 14 years).
- Reis RM. scientific promotion entrevista at the program "Viva a Ciência", at the RTP internacional and at RTP Africa Canal TV station (16-03-07);
- Teixeira A and Palmeirim I. Learning Science: from Hollywood to the laboratory. Poster presentation at the "2º Encontro Comunicar Ciência", Instituto de Biologia Molecular e Celular (IBMC-INEB) Porto 16th June, Portugal (2007).

Next, we present a full report of the "Portas Abertas" (Open Labs, Scientists for a day) that took place on the 22nd and 23rd of November, 2007. In the scope of this initiative, the ICVS/ECS promoted to a series of activities involving 4th, 7th and 10-12th grade students, in a total of 380 young scientists. "Hands-on" experiments were designed for each of the three educational levels above, to allow our young visitors to become "Scientists for a day".

Report: Open Labs, Scientists for a day

**Science and Technology week, 2007 edition, promoted by
*Agência Ciência Viva, Unit of the *Ministério da Ciência e da Tecnologia****

Introduction

What science is being carried out in Portugal? Who are our scientists? How do they work? What are they researching? Which results have they obtained?

Every year, in November, during the Science and Technology Week, scientific institutions, universities, schools, associations and museums open their doors so that these and other questions may be answered; promoting the activities they have been developing through direct contact with the public.

Agência Ciência - Viva

The School of Health Sciences and the Life and Health Sciences Research Institute dedicated 22 and 23 of November of 2007 to a series of activities involving 4th grade, 7th grade and 10-12th grade students, in a total of 380 young scientists. "Hands-on" experiments were designed for each of the three educational levels above, to allow our young visitors to become "Scientists for a day".

Cientistas por um dia
Semana da Ciência e da Tecnologia 2007

Portas abertas
Escola de Ciências da Saúde
Instituto de Investigação em Ciências da Vida e Saúde
Universidade do Minho, Campus de Gualtar - Braga

A Escola de Ciências da Saúde (ECS) e o Instituto de Investigação em Ciências da Vida e Saúde (ICVS) da Universidade do Minho têm o prazer de convidar as escolas interessadas a participar na actividade "Cientistas por um dia", no âmbito da Semana da Ciência e Tecnologia 2007.

Esta actividade, que terá lugar nos dias 22 e 23 de Novembro nas instalações do ECVS/ICVS no Campus de Gualtar da Universidade do Minho, tem como público-alvo alunos do ensino básico e secundário. Entre as opções a dinamizar destacamos a realização de experiências científicas, estruturadas, apelativas e didácticas, com o apoio de docentes e investigadores da ECVS/ICVS.

O dia 22 de Novembro é dedicado aos alunos do 4º ano de escolaridade.

Programa do 4º ano (10h00-13h00; 100-120 alunos):
Descobrir o que é ácido e básico
O arco-íris escondido na tina preta
Experimentando os sentidos
Observação de embriões de galinha à lupa
Observação de microorganismos ao microscópio

O dia 23 de Novembro é dedicado a alunos do 7º-9º e 12º ano.

Programa 7º-9º ano (9h00-13h00; 50-60 alunos):
Descobrir o que é ácido e básico
O arco-íris escondido na tina preta
Experimentando os sentidos
Observação de embriões de galinha à lupa
Observação de microorganismos ao microscópio
Extração do ADN

Programa do 12º ano (14h00-18h00; 50-60 alunos):
"Clonagem Científica". Encenação de uma "investigação criminal" que permitirá a aprendizagem de conceitos básicos de biologia molecular bem como a sua aplicação na biologia forense. Os alunos serão divididos em pequenos grupos e convidados a fazer uma investigação virtual e laboratorial com a ajuda de Docentes e Investigadores do ECVS/ICVS.

As escolas interessadas podem fazer a marcação por e-mail ou fax, não esquecendo de indicar o número de turnos, nível de escolaridade e número de alunos de cada turma.

Com os nossos melhores cumprimentos,

Carla Boia
Escola de Ciências da Saúde
Instituto de Ciências da Vida e Saúde
Universidade do Minho
Campus Gualtar
4710-057 Braga, Portugal
Teléfono: +351 253 604061
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22 de Novembro
Actividades para alunos do 4º Ciclo do ensino básico.

23 de Novembro
Actividades para alunos do 2º Ciclo e do ensino secundário.

As escolas interessadas devem efectuar marcação prévia:
cpv@ecvs.uniminho.pt
Fax: +351 253 604047

organização:
Escola de Ciências da Saúde
Universidade do Minho

APOIO:
EMBO
Instituto de Ciências da Vida e Saúde
Universidade do Minho

ICVS
Instituto de Ciências da Vida e Saúde
Universidade do Minho

le - os nossos
serviços de
CIÊNCIA
E DA TECNOLOGIA

The promotion of the activity was achieved by sending invitations directly to the 163 schools of the District of Braga. The invitations included a poster and general description of the experiments to be performed.

Table1. Information concerning identification of schools, locality, student grades and number of students involved in the activities.

Day	School	Locality	Grade	Number of students
22 Nov	EB 1 S. Lázaro	Braga	4th	50
	Associação A Bogalha	Braga	4th	10
	EB 1 de S.Vitor	Braga	4th	48
	EB 1 Agrup. Escolas Prof. Gonçalo Sampaio	Póvoa de Lanhoso	4th	22
	EB 1 Sé de Braga	Braga	4th	24
	EB 1 de S.Victor	Braga	4th	47
23 Nov	EB2,3 D. Maria II	V. N. de Famalicão	7th	44
	ES Francisco de Holanda	Guimarães	10th	56
	ES D. Maria II	Braga	12th	61
	Escola Profissional de Braga	Braga	12th	18

The first day was reserved to the 4th grade students while the second day was reserved to 7th and 10-12th grades (see Table 1). Following the previous experience in “Open Labs-2006”, the activities involving the 4th and 7th grade students were coordinated using a rotation system in which groups of 10-15 elements visit and perform experiments in each of the following six *Experimental Stations*:

- Finding out which day-by-day products are acidic or basic (4th and 7th grade)
- The rainbow hiding in ink (4th grade)
- Fooling the Senses (4th and 7th grade)
- Observation of chicken embryos (4th and 7th grade)
- Observation of microorganisms hiding in ponds using the microscope (4th grade)
- Today I will be a Doctor (4th grade)
- Learning about DNA: Extracting DNA from bananas (7th grade)

The “CSI-Braga” activity involved 10-12th grade students and was divided in two steps: (1) a practical activity using forensic molecular biology techniques and (2) a cinema session including two episodes of “CSI-Las Vegas”.

Elements from each school were divided into two groups. One of them went to a cinema room, in order to get a virtual picture of the procedures involving molecular forensics. The remaining students followed an introductory course on molecular biology-forensics, and then solve a staged crime by some forensic procedures.

In the end the students confronted both realities in order to acquire a critical view of the TV series.

Scientists from ICVS involved in the activities

Scientists involved in the activities were the following:

Experimental Station 1: Finding out which day-by-day products are acidic or basic

Alexandra Fraga	afraga@ecsaude.uminho.pt
Andrea Cruz	acruz@ecsaude.uminho.pt
Cláudia Nóbrega	crnobrega@gmail.com
Daniela Pereira	dpereira@ecsaude.uminho.pt
Jenny Carmona	jennycarmona@ecsaude.uminho.pt
Margarida Saraiva	msaraiva@ecsaude.uminho.pt
Susana Roque	sroque@ecsaude.uminho.pt
Teresa Martins	teresa_ba@portugalmail.pt
Cláudio Alves	claudioalves@ecsaude.uminho.pt
Egídio Torrado	egidio@ecsaude.uminho.pt

Experimental Station 2: The rainbow hiding in ink

Ana Luísa Correia	anacorreia@ecsaude.uminho.pt
Céline Pinheiro	cpinheiro@ecsaude.uminho.pt
Fátima Baltazar	fbaltazar@ecsaude.uminho.pt
Inês Almeida	inesalmeida@ecsaude.uminho.pt
Ísis Alonso	isis@ecsaude.uminho.pt
Luísa Ferreira	mariaferreira@ecsaude.uminho.pt
Marta Lopes Tibúrcio	martatiburcio@ecsaude.uminho.pt
Marta Pereira	martapereira@ecsaude.uminho.pt
Sandra Costa	sandracosta@ecsaude.uminho.pt

Experimental Station 3: Fooling the Senses

Adriana Sampaio	adrianasampaio@ecsaude.uminho.pt
Armando Almeida	aalmeida@ecsaude.uminho.pt
Filipa Ribeiro	filiparibeiro@ecsaude.uminho.pt
Hugo Almeida	hugoalmeida@ecsaude.uminho.pt
Irene Melo	irene.melo@gmail.com
Joana Fraga	
Leonor Gonçalves	leonorg@ecsaude.uminho.pt
António Salgado	asalgado@ecsaude.uminho.pt

Experimental Station 4: Observation of microorganisms hiding in ponds using the microscope.

Ana Macedo Mesquita	ammesquita@ecsaude.uminho.pt
Maria Belém Marques	mbmarques@ecsaude.uminho.pt

Experimental Station 5: Observation of chicken embryos.

Caroline Jeya Sheeba Franklin	sheeba@ecsaude.uminho.pt
Mónica Ferreira	monicaferreira@ecsaude.uminho.pt
Raquel Andrade	rpandrade@ecsaude.uminho.pt
Rui Quinta	ruiquinta@gmail.com
Tatiana Resende	tatiana@ecsaude.uminho.pt
Tiago Braga da Cruz	tiagobragadacruz@gmail.com

Experimental Station 6: Learning about DNA: Extracting DNA from bananas.

Raquel Andrade	rpandrade@ecsaude.uminho.pt
Rui Quinta	ruiquinta@gmail.com

Experimental Station 7 : CSI-Braga.

Ana Falcão	luismendanha@gmail.com
Ana João Rodrigues	ajrodrigues@ecsaude.uminho.pt
Anabela Silva Fernandes	anabelasf@ecsaude.uminho.pt
Andreia Teixeira Castro	accastro@ecsaude.uminho.pt
Claudia Botelho	claudiabotelho@ecsaude.uminho.pt
Fernanda Bajanca	fbjanca@ecsaude.uminho.pt

Experimental Station 8 : Today I will be a Doctor

Isabel Palmeirim	ipalmeirim@ecsaude.uminho.pt
Mónica Ferreira	monicaferreira@ecsaude.uminho.pt
Tatiana Resende	tatiana@ecsaude.uminho.pt

Photographic report

Fernanda Bajanca	fbjanca@ecsaude.uminho.pt
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The Impact on society

There was important media coverage of the event, including interviews in one national radio (Radio Clube Português)) and four local Radios (Rádio Clube Português, Rádio Universidade do Minho, Rádio Antena Minho, Minhoactual.tv and ComUM)

Newspaper coverage included two regional newspapers (Diário do Minho e Correio do Minho) and a National Newspaper (Jornal de Notícias).

Internet coverage included University of Minho related sites (UMonline, COMUM and Nemum); Science related sites (Cienciahoje, CienciaPT, EditonWeb and CiênciaViva).

The *Minhoactual.tv*. and the *ComUM* made video-coverage accessible through the following links:

http://www.comumonline.com/index.php?option=com_content&task=view&id=343&Itemid=79
<http://videos.sapo.pt/MAHd2OH35Ft51KWVAEBE>

Activities

Equipment	Station 1: Finding out which day-by-day products are acidic or basic	Station 2: The rainbow hiding in ink
		
Station 3: Fooling the Senses	Station 4: Microorganisms	Station 5: Chicken embryos
		
Station 8: Hoje vou ser médico	Station 6: Extracting DNA	Station 7: CSI-Braga
		

Program developed by:

Isabel Palmeirim and Carlos Brito, with the support of teachers, researchers and technical staff of the ECS/ICVS, University of Minho.

APPENDIX V

Other Research Activities

Other Research activities

Participation in Bilateral Actions

1. “Glucocorticoid regulation of mood and cognition relevant neural substrates”

CRUP-DAAD grant

Principal Investigators: Nuno Sousa (ICVS, Portugal) and Osborne Almeida (Germany).

Duration: 2005-2006.

2. “Characterization of the iodine status of Portuguese women in fertile age and its relation with the psychomotor performance of the newborn”

Exchange grant CRUP. Bilateral action Portugal-Spain.

Principal Investigators: Joana Almeida Palha (ICVS, Portugal) and Gabriella Morreale de Escobar (Molecular Endocrinology Unit, Instituto de Investigaciones Biomédicas, Madrid, Spain).

Duration: 2006-2008.

Participation in International Networks

Isabel Palmeirim

- Member of the “EU network of excellence – Cells into Organs: functional genomics for development and disease of mesodermal organ systems on the development of mesodermal organ systems”. <http://www.cellsintoorgans.net>

Joana Palha

- Member of the Neurinfnet COST Action. <http://www1.sdu.dk/multi/neurinfnet/>

Participation in Evaluation Panels

1. Adhemar Longatto. Evaluator for the European Commission 7th Framework Program - Ethiology of Cancer in Latin-America panel, 19-21th-November 2007, Brussels, Belgium.
2. Joana Almeida Palha. Member of the Jury L’Oreal Medals of Honor for Women in Science 2007; Member of the Evaluation Panel for the European Commission 7th Framework program; Member of the Evaluation Panel for GRICES (Portuguese Science Foundation).

Membership of the Editorial Board of National / International Journals

- Costa MJ – Editorial Board of the Journal Biochemistry and Molecular Biology Education
- Costa MJ – Editorial Board of the Biblioteca Digital de Ciências do Laboratório de Tecnologia Educacional da Universidade de Campinas (Brasil), <http://www.ib.unicamp.br/lte/>
- Costa MJ – Editorial Board of *The BIOQuest Libray*
- Palmeirim I – Associate Editor of the International Journal of Developmental Biology (IJDB)
- Reis RM – Editorial Board of The Open Pathology Journal
- Rodrigues F – Editor of “The Open Mycology Journal”
- Salgado AJ – Editorial Board of the Open Biomedical Engineering Journal

Participation on International Societies

- Palmeirim I - Member of the council of the European Society for Evolutionary Developmental Biology.
- Jorge Correia-Pinto – Faculty member of the “Word Electronic Book of Surgery” (WebSurg) - www.websurg.com.

Collaboration with National and International Research Institutions

Besides the cooperation 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.

APPENDIX VI

ICVS/External Advisory Committee Report

Institut Pasteur

25, RUE DU Dr ROUX,
75724 PARIS CEDEX 15

Paulo Vieira

Unité du Développement des Lymphocytes.

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Paris, October 31st 2006

Report by the External Advisory Committee of the *Instituto the Ciências da Vida e da Saúde (ICVS)*

The External Advisory Committee (EAC) of the ICVS is composed of Drs. Marina Bentivoglio (University of Verona, Verona), Alan Flake (University of Pennsylvania, Philadelphia) and Paulo Vieira (Pasteur Institute, Paris). On June 20th 2006 the Committee visited the facilities of the ICVS, interviewed the research staff, post-docs and students, and met with the Board of Directors of the Health School (ECS) and of the ICVS. This report summarizes our opinions and advice regarding the research activities of the ICVS.

We were very satisfied to see that the ICVS laboratories are organized in a network of shared facilities that support the research groups in a multidisciplinary way. This type of organization, as well as the centralized system for the management of reagents and consumables, is very efficient and contributes decisively to the maximization of the available resources.

In general terms we were very favorably impressed with the achievements of the research staff in such a short period of time (the Institute initiated its activities in 2003). The Institute has managed to publish an impressive number of scientific papers, in spite of the serious constraints resulting from the insufficient space they work in, and the cramped conditions of the support facilities (we mention in particular the reduced size of the Animal Quarters). The new facilities under construction in the Gualtar Campus, which we visited, are however ample and should provide a significant opportunity to further strengthen the research work at the ICVS and permit development of new areas of research.

The ICVS is structured around 3 main "Domains of Research": "Development and Neoplasia", "Infectious Diseases" and "Neurosciences".

It makes sense that a new and competitive Institute, such as the ICVS, has chosen a restricted number of strategic areas where to concentrate their research efforts. In the near future, available resources should not be dispersed, but used primarily to reinforce those areas that can produce competitive research. The specific areas of research selected at the launching of ICVS are important and internationally competitive and seem adequate to the needs of a country like Portugal.

Additionally, the ICVS plays a critically important role in the context of the ECS medical course. The opportunity given to students to integrate competitive research groups in diversified areas of biomedical science contributes to the high quality of the medical teaching at ECS as well as the PhD and other post-graduate programs of the school. The ICVS will also play a fundamental role in the future MD/PhD program of

the ECS.

The investigators in the 3 "Domains" interact easily with each other and pursue a number of "cross-Domain" collaborative projects. The friendly relations between the members of the staff and the development of collaborative projects are a very strong point of the Institute, and we encourage its Directors to pay special care that future expansion of the ICVS, and the recruitment of new research groups, does not interfere with the nice spirit of close solidarity we observed in our visit.

The ICVS also has a number of PhD students and post-Docs for research training. This personnel, having no obligatory teaching duties, are naturally the most active at the bench. As is always the case, the supervisors should ensure that their other teaching and managerial duties do not prevent them from adequately supervising and training this class of researchers. The number of post-Docs is somewhat small and in our opinion the recruitment of more post-Docs would benefit research at the Institute.

Given that the Institute is still in its "infancy" special care is needed to encourage its continued development. We urge the National Authorities, the University of Minho (UM) and the ECS to be serious and consequent in the support they are prepared to offer the ICVS. We identified in particular the following areas where special support from the University, the School and the National Authorities is vital for the transformation of the ICVS into a solid, internationally renowned Research Institute:

- The Animal Facilities are exiguous and represent at the moment the most serious impediment to the research carried out at the ICVS. It is urgent that funding be made available to build an animal facility of a reasonable size and with a spacious containment facility. This is particularly urgent in view of the impending move to the new Institute (under construction), when the physical distance that will separate the Labs from the animal quarters will rapidly become a major handicap. We advise that a new animal facility be built in close proximity to the new Institute, in time for it to commence operations at the time of the move.

- The Institute does not have a Library and lacks subscriptions to major Research Journals. The ability to read the scientific literature in a timely fashion is of major importance in conducting research that is internationally competitive. We strongly advocate the allocation of a specific budgetary item (eventually with financial support from the relevant authorities) to correct this.

- All of the academic staff of the ECS accumulate their research activities with teaching duties at ECS. The pedagogic approaches followed in the school lead to the concentration of the teaching activities in specific periods of the academic year, which favors the research activities of the academic staff members. On average the annual workload of their pedagogic activities is 40% whereas research activities occupy 60% of their time. It is very important that this policy be kept and continuous care should be taken to prevent the teaching duties from becoming an unbearable burden and interfering seriously with the conduct of research. The recruitment of staff whose primary duty is to do research should be a priority. In this context, the attribution to the ICVS of a number of research positions (with no teaching duties) would be a significant improvement on the current situation. Allocation of financial resources for the recruitment of highly differentiated technical staff would also be very important for the research activities of the ICVS.

- The institute has already a number of pieces of scientific equipments acquired with financial resources, allocated mainly by ECS. Recently, Portuguese governmental agencies for science granted the ICVS with funds that will be used to purchase heavy scientific equipments such as a confocal microscope, a microdissector microscope and a DHPLC. This amount is clearly insufficient for the challenge of equipping the new ICVS building with state of the art scientific equipment as well as other pieces of fundamental heavy equipment such

as a cell sorter, an electron microscope, electrophysiology apparatus, etc. The support of governmental agencies, through the allocation of further funding to allow the purchase of more scientific equipment, is necessary to establish a high standard, internationally competitive, institute in biomedical research at the UM.

Paulo Vieira (on behalf of the members of the EAC: **Marina Bentivoglio, Alan Flake**)

Unité du Développement des Lymphocytes.

Institut Pasteur de Paris