



School of Health Sciences

ANNUAL REPORT
2015–2016

University of Minho

INDEX

1. INTRODUCTION & GENERAL OVERVIEW	5
2. OBJECTIVES AND STRATEGIES IN 2015-2016	7
3. ACTIVITIES AND ACHIEVEMENTS IN 2015-2016	9
Medical Degree Course	9
Six-year Integrated Master Program in Medicine	9
Four-year Graduate Entry Program in Medicine	9
Global number of undergraduate students in the medical program	10
Medical Students Associations: NEMUM and <i>Alumni Medicina</i>	10
NEMUM Report.....	10
Alumni Medicina Report.....	11
Post-graduation	13
Research.....	14
4. ARTICULATION WITH THE NATIONAL HEALTH SYSTEM	17
5. ECS GOVERNING BODIES, SUBUNITS AND COORDINATING BOARDS	18
6. HUMAN RESOURCES	18
Academic staff.....	18
Non-academic staff.....	19
7. FINANCIAL RESOURCES	20
8. PLANS FOR 2016-2017	20
9. FINAL REMARKS	21

APPENDIXES

APPENDIX I – Organization and Management

APPENDIX II – ECS Academic and Non-Academic staff

APPENDIX III – Clinical Coordinating Groups, Supervisors, Tutors at Affiliated Hospitals and Health Centres

SUPPLEMENTARY REPORTS

(Detailed Reports of Pedagogical and Scientific Activities)

. Snapshot Medical Degree-Assessment of the Academic Year 2015-2016

. Post-graduation Report 2015-2016

. ICVS Annual Report 2015

1. INTRODUCTION & GENERAL OVERVIEW

The present report provides an overall view of the School of Health Sciences, including its Research Institute (the ICVS – Life and Health Sciences Research Institute), and the main strategies and progresses in the academic year 2015-2016. The detailed data on the scientific and pedagogical activities are presented in individual attached reports.

The mission of the School of Health Sciences (ECS) is to promote better quality of care to populations through education and research. In this Report we will highlight the major events and achievements of the academic year 2015-2016.

First, in 2015-2016, we have successfully finished the graduation of the 10th cohort of medical students. This important landmark was achieved, as always, in a collaborative effort between students, researchers, faculty and staff. We maintained the commitment of meeting the required international standards of quality in medical education. At the educational level, we are trying to improve our processes to apply for another component of the Aspire Certificates of Excellence in Assessment of Students.

There was an effort to reinforce the collaboration with our national and international partners, in particular with the National Board of Medical Examiners (NBME-USA), Thomas Jefferson (Sidney Kimmel) Medical School and with Fundação Luso-Americana para o Desenvolvimento (FLAD). The demand in increasing international operations has increased, namely with a large number of memorandum of cooperation with several international medical schools and established several international contacts such as those with the Global Education in Medicine Exchange. In addition, the ECS has been requested to provide consultancy services to foreign medical schools, particularly in Brazil, which resulted in the establishment of collaboration agreements that represent not only new challenges but also considerable revenue sources.

We pursued our operations in Continuous Medical Education, in collaboration with our Alumni. Several initiatives to strengthen the quality of education and training in residency programs were developed with increasing recognition and impact. Moreover, using the same setting, we have expanded the portfolio for the acquisition and training of laboratory skills by medical students, which resulted in the positive improvement in the assessment of clinical skills and laboratory competences.

The ECS completed the fifth year of the new pathway, the “Four-year Graduate Entry program” of the medical degree, approved by the University of Minho and by the National Accreditation of Higher Education Agency (A3ES) in April 2011. This program is available for students holding a bachelor or “licenciatura” degree. This experience has provided positive results with students entering the clinical years with similar success as their colleagues from the regular pathway as well as with similar performance in international clinical knowledge tests.

A note also to highlight that the operation port-portfolio of our spin-offs has expanded. In the education context, it should be highlight the activity of *ICognitus*, a spin-off company dedicated to medical education services. This has largely resulted from our efforts to create an assessment software, *medQuizz®*, for written exams. This software proved to add value to the assessment process within the ECS, since students have greater control to monitor their progression during the exam, while teachers can rapidly identify questions with potential problems (to act in accordance before results are announced) and have an immediate detailed report on the quality of the exam and on student's performance. Of relevance, this software has gained the interest of several prestigious international institutions.

A medical school cannot exist without healthcare institutions. We have settled, in the Minho region (and beyond the region), innovative partnerships with healthcare institutions. The ECS continued to nurture these cooperative partnerships to assure the best setting for medical training, clinical care and research. The activities of the Clinical Academic Centre-Braga Association (2CA-BRAGA), have expanded considerably which contributed to leveraging clinical research in the region and in Portugal – as a result, 2CA has been invited to be a founding member of the National Council of Clinical Academic Centres.

Postgraduate education is a major mission of the ECS, not only within formal Master and PhD programs, but also for advanced training for health professionals and biomedical researchers. In 2015-2016 the ECS enrolled 44 additional students in the Master and PhD programs, most of which within the four FCT-funded programs awarded to the ECS. In 2015-2016 two additional PhD programs were provided to the ECS, within the P2020 call for PhD programs, which adds eight additional PhD scholarships for the next academic year. Also to highlight is that our PhD programs have been accepted to be part of the Network of European Neurosciences Schools-NENS (<http://www.fens.org/Training/NENS/>), which is a recognition of the quality of the ECS activities and will provide visibility to all advanced training initiatives of the school. While funding to secure talented PhD students has been very successful in the past five years, a great concern remains with respect to the more senior researchers, both at the postdoctoral and at the research levels. It is still unclear how the recent legislation on contracts to researchers will impact on the ability of the ICVS to maintain the quality and continuity of the technological platforms and of training presently provided.

As for the offer in advanced training courses, the ECS/ICVS continue to attract a considerable number of participants, 1003 in 2015-2016. The courses on entrepreneurship and research innovation, launched for the first time last year, were maintained, confirming the expectation that this will contribute to bring novel competences of young researchers on how to translate basic research into applied products.

Regarding research activities, in 2015 the ECS and the ICVS expanded their outcomes and achievements. Indeed, the number of peer-reviewed international publications significantly increased (172 papers in international peer-reviewed journals - referenced in ISI, Scopus or Pubmed - in addition to 16 international

book chapters and 162 communications and proceedings in international congresses). The increase in the number and impact of the clinical studies developed in the 2CA-Braga, including clinical trials, was also a major achievement (35 clinical trials ongoing in 2015 - corresponding to around 30% of the clinical trials run in Portugal – in addition to 42 clinical studies, including research projects in partnership with the ICVS and other UMinho R&D units). In 2015, it was also possible to increase the number of MD students involved in the ICVS research activities. As a critical achievement for the ICVS and the ECS in 2015, it is to be highlighted the completion of the construction of the “Biotério” animal facility in the adjacent area of the ECS/ICVS building.

Due to continuous growth of the ECS, the number of academic and non-academic members has also increased. The incorporation of new members has been in general extremely positive and their integration brought added value. This integration has been achieved in parallel with the effort to improve the scientific and pedagogic quality of the academic staff. The ECS has continuously monitored the performance of every staff member in several academic domains (scientific, pedagogic and managerial); a similar monitoring policy has been put forward in what regards the non-academic staff.

From the financial perspective, 2015-2016 continued to be a very difficult period for the universities in Portugal, and therefore for the UMinho. As a positive development, as mentioned below in more detail, the budget transferred to ECS has increased, mainly in 2016, due to a new algorithm used by the rectory to allocate funds to all the UMinho units, which represents an increase in the transparency of the intramural funding process. In parallel, the ECS and the ICVS have significantly expanded their sources of competitive funding. This has mitigated the detrimental impact of low budgets and assured the conditions for the continuous development and consolidation of the ECS/ICVS project.

2. OBJECTIVES AND STRATEGIES IN 2015-2016

During its sixteen years of existence, the project of the ECS has been well established and progressing as planned, having achieved significant success in its educational programs and research activities. The major goal established for 2015-2016 was to keep a permanent commitment to the benchmark of quality at the highest international level. Thus, we pursued continuous improvement, seeking to assure the best conditions to reinforce the ECS dynamism with its engagement in new educational and research initiatives, building on existing strengths, and the capacity of ICVS to perform internationally cutting-edge research within the context of the ICVS/3B's AL, as well as the remarkable success in the development of clinical research achieved by the Clinical Academic Centre – Braga, Association (2CA-Braga).

To achieve these aims, we reinforced our commitment on:

- the continuous improvement of the pedagogic and scientific quality of the ECS project;
- the development of the “Four-year Graduate Entry Program” in Medicine that entered the fifth year in 2015-2016;
- the adjustment and implementation of new pedagogic methods, namely “team-based learning” in specific areas of the study plans;
- the continuous development of the best practices of medical assessment, with the collaborative effort with the National Board of Medical Examiners (NBME-USA) and the European Board of Medical Assessors (EBMA). There was a commitment to adjust the existent, and to explore new, assessment tools that better reflect the acquisition of medical skills; these actions proceeded in parallel with the efforts in medical education research in this topic. This was complemented with an effort to assure the quality, and subsequent certification, of the assessment process;
- the reinforcement of the support to the longitudinal acquisition, training and assessment of clinical and laboratory skills, using well-established, but also innovative, methods and tools;
- further, the structuring and organization of medical residence training program and clinical fellowships programs, as well as the development of new collaborations with our health-care partners, particularly through Clinical Academic Centres, and also fostering new collaborations with other research partners and several industrial partners;
- the internationalization of the ECS project, namely through the establishment of new partnerships with other prestigious medical schools around the globe, participating in several international collaborative efforts such as the Global Educational Exchange in Medicine and the Health Professions.

The construction and consolidation of the ECS pedagogical project continued in parallel with the capacity of ICVS to perform internationally cutting-edge research. We reinforced our commitment to:

- accomplish the construction of the “animal facility” building, a major bottle neck of the ICVS, which was finalized during 2016;
- develop and consolidate the newly created satellite research nucleus on Public Health and on Medical Education in the context of the ICVS;
- explore new perspectives for the expansion of our research activities within the context of ICVS/3B’s AL;
- develop and expand clinical research through the 2CA-Braga in collaboration with national and international industrial partners.

3. ACTIVITIES AND ACHIEVEMENTS IN 2015-2016

Medical Degree Course

Six-year Integrated Master Program in Medicine

A separate report (*Snapshot Medical Degree-Assessment of the Academic Year 2015-2016*), prepared by the Medical Education Unit, detailing the pedagogical activities and results undertaken in the academic year 2015-2016 is presented as Supplementary Report. A brief summary of the academic achievements follows.

The academic performances available show no striking variations from the previous year. The success rates in the majority of the curricular units of the first 3 years were equal or above 81%. As in the past, the highest failure rates are observed in the first year of the Medical Degree. The minimum approval rates in courses in the 3rd year is 96%, proving that, in terms of academic performance, students who successfully perform in the first years continue to thrive in the remaining of the curriculum.

In the year 2015-2016, 123 new students were admitted via the national admission process (118 under the general regime and 5 under the special regime for handicapped students and students from the Azores and Madeira Autonomous Regions). Additionally, three new students were admitted through special regimes for students from Portuguese speaking countries and diplomats. The total number of admitted students was therefore 126. The total number of students with valid registrations was 126.

For the national admissions process (general contingent), the lowest entrance grade for the newly admitted students was 183.2 out of 200. Fifty-four percent of the students admitted under the general admission regime chose ECS as their first option.

The gender balance of the new entrants in 2015-2016 was 66% female and 24% male students. Regarding the regional origin of students, 47% come from the District of Braga, 35% from the District of Porto and 18% from other Districts of the Country.

Four-year Graduate Entry Program in Medicine

In 2015-2016, we continued with the new pathway “Four-year Graduate Entry Program” for graduate students. In this program, the selection process is within the full control and responsibility of the ECS. The 2015-2016 graduate entry track selection process to the 18 places was identical to the previous year and included 4-steps: (1) administrative selection - mandated the delivery of a set of certificates, which included holding a previous degree with a final graduation grade point average equal or above 14/20 points; (2) written examination of knowledge – a Basic Sciences Admission Test with 100 multiple choice questions on biology, mathematics, chemistry and physics; (3) the Assessment of Transversal Skills (ATS) – a Multiple Mini-interview like exam (OSCE-type) series of 10 stations, intended to assess personal attributes and soft skills; (4) analysis of *curricula vitae*. There were 203 applicants to this Program (11 applicants/place). The top-scoring 28 students were admitted to the ATS. From these, 18

students were admitted to the “Four-year Graduate Entry Program” in 2015-2016, all with valid registrations.

Global number of undergraduate students in the medical program

The global number of undergraduate students registered in the medical program in the current academic year (2016-2017) is 135 in the first year, 133 in the second year, 152 in the third year & first year Graduate Entry Program, 132 in the fourth year & second year Graduate Entry Program, 153 in the fifth year and 131 in the sixth year. The total number of students amounts to 836.

Medical Students Associations: NEMUM and *Alumni Medicina*

NEMUM Report

NEMUM (*Núcleo de Estudantes de Medicina da Universidade do Minho*) is the official representative of medical students at the University of Minho. It is a non-profitable organization, composed of students working for students and, this year, celebrated its fourteen anniversary.

Aside from its commitment to represent the students, NEMUM is also responsible for the organization of several activities of many kinds, from scientific congresses and informal discussions, curriculum complementation, soft skills workshops, community health awareness actions, cultural and recreational activities to scientific and clinical exchanges among countries all over the world.

In regards to NEMUM’s relationship with ECS/ICVS, it has been based on trust and total availability, allowing for opinions and ideas to be freely shared and discussed from both sides. This is only possible due to the openness of the ECS/ICVS to their students and their representatives, and the ever-increasing conjoint pursuit of better opportunities for the students.

In 2016, NEMUM kept organizing desirable activities for its students and challenging them with new workshops and training on several important personal, technical and medical skills. For instance, NEMUM organized the 12th Professor Joaquim Pinto Machado Cultural Week; several clinical competence workshops; monthly public debates on medical subjects; the 9th Minho Medical Meeting, this year with a multidisciplinary theme (Psychiatry and Traumatology); any health screenings to the population; Professional and Research Exchange programs with more than forty incoming and outgoing students; the 5th Teddy Bear Hospital; the 6th Vital Run, a running event held at Braga’s; the 3rd Happy Village, a project that aimed at bringing health improvement and accident prevention tips to an elderly and isolated population in a rural district, this year in Arcos de Valdevez, a city far away from the hospitals centers that leads to severe difficulties of healthcare access to the population.

NEMUM is constantly contacting and cooperating with other entities, namely the University of Minho Students’ Association, the University of Minho Medical Alumni Association, the Portuguese Medical Students

International Committee, the Portuguese Medical Association and the International Federation of Medical Students' Associations, in order to promote and improve the developed activities.

It is NEMUM's intention to continue its work and, most of all, to consolidate and improve the manner in which it organizes itself and prioritizes the activities that are more important and relevant for the students, to complement medical students' education, in social, technical, personal, cultural and scientific aspects.

Summing up, this association is obviously important to ECS's students, and also to ECS itself, boosting the interest and curiosity of the entire community for science and learning.

NEMUM's Executive Board for 2016: João Dourado (President); Flávia Freitas (Vice-President External Affairs); Bruno Sousa (Vice-President for Internal Affairs); Joana Maia (Executive Coordinator); Bárbara Baptista (Treasurer).

The NEMUM President, João Dourado

Alumni Medicina Report

«*Alumni Medicina (Núcleo de Antigos Estudantes de Medicina da Universidade do Minho)* is a non-profit association composed by the *alumni* of the School of Health Sciences of the University of Minho. The mission of this association is to support the project of the School of Health Sciences and to promote the interaction between its members and between its members and their *alma mater*.

In the last years a significant effort was devoted to increase the number and the quality of the scientific sessions (courses and workshops) organized by *Alumni Medicina*. The aims of this scientific program are to offer more diversity and opportunities for Continuous Medical Education to healthcare professionals and to promote the interaction between the School and the professionals from different universities and healthcare institutions. In addition, these events are an important financial support to the project of *Alumni Medicina*. In the current year we organized the following post-graduate sessions: "Mental Health during Childhood" (14th of November), "Contraception Workshop" (28th of November), "Hemogram Enigmas" (20th of February), "iPsiquiatria" (3rd-5th of March), "iNeurology" (20th, 21st, 22nd of March) and the second edition of the 4-day course entitled "Update in clinical skills" (9th-12th of May) which included the following sessions: "Psychiatry front and back", "Imagiology workshop", "Interpretation of the EKG" and "Hidroelectrolytic disorders: from arterial blood analysis to fluid therapy ". Of notice, in this year we also organized nine courses of "Communication Skills", five of which directed to pharmaceuticals and four directed to nurses. The number of participants attending the sessions was high and their feedback about the sessions was, overall, very positive.

Beside the scientific initiatives, *Alumni Medicina* also developed its activities in different fields. In the end of 2015 we organized again the “ExpoIAC” – a meeting where young doctors transmit their experience to recent graduates about the best places for formation during the “common year internship”. The same session is planned to happen in November 2016.

In 2016 *Alumni Medicina* kept the cooperation between *alumni* and current students through their association (NEMUM). From a social perspective *Alumni Medicina* kept the social emergency program, a fund created to help current students with financial difficulties.

In order to promote cultural exchange inside the walls of the School of Health Sciences *Alumni Medicina* organized photography and/or painting exhibitions in the main hall of the School,

Finally, we organized two gathering meetings, not only directed to the *Alumni Medicina* members, but also open to the community of School of Health Sciences, in an attempt to create more opportunities for people to connect and network.

For the next year we expect to certificate our post-graduate sessions, to establish new partnerships with sponsors and design a strategy to support medical research.

The *Alumni Medicina* President, Vitor Hugo Pereira

Post-graduation

The formal advanced training at the ECS presently encompasses the following programs:

Master program in Health Sciences

Seventeen students enrolled in 2015-2016 and 14 students defended their theses. It is to note that 5 of the newly admitted students are foreign, which is a sign of the ability to attract international students.

PhD program in Health Sciences

Ten students enrolled in 2015-2016. Twelve students defended their theses.

Of notice, the launching of the second call of the FCT PhD program in Health Sciences (Applied) (a total of 36 scholarships for four editions) which contributes to consolidate the intention to formally collaborate with partners from the entrepreneur milieu.

PhD program in Medicine

Ten students enrolled in 2015-2016, of which five in the specific MD/PhD pathway. Four students defended their theses.

Aging and Chronic Diseases

In this interinstitutional (University of Coimbra and Nova University of Lisbon) FCT PhD program, seven new students were admitted in the academic year 2015-2016.

Altogether, in July 31st 2016, 32 Master and 96 PhD students were enrolled in the ECS post- graduation formal programs.

As for the continued advanced training in medicine and in biomedical sciences, 2015-2016 counted with 1003 participants, distributed among the 45 courses and workshops. Of these participants, 73% originated from national institutions outside the University of Minho and 10% from foreign institutions; 80% were medical doctors. These indicators are encouraging in that the ECS/ICVS is a place of choice for advanced training and continuous medical education. Of notice, was the offer of training for residents, within the national residency programs in Anesthesiology, Neurology, Psychiatry and Internal Medicine, which in 2015-2016 brought to the ECS 191 residents. These particular initiatives, launched in collaboration with the Alumni, have also contributed to the visibility of the ECS and constitute a challenge to foster excellence in advanced training. In addition, and also in collaboration with the Alumni, specific training of communication skills for health professionals was organized and counted with 260 participants.

Research

The ECS research activities are developed in the context of the Life and Health Sciences Research Institute (ICVS). The ICVS is a research structure fully incorporated within the ECS, integrated in the national system of science since 2003 and ranked with “Excellent” by the FCT’s international evaluation panels.

The research activities in the ICVS are centralized in three multidisciplinary Research Domains: i) Microbiology and Infection; ii) Surgical Sciences and; iii) Neurosciences - which are supported by laboratorial core units. Additionally, two Pilot Research Lines on Community Health and on Education on Life and Health Sciences have been recently launched.

The distinctive aspects of the ICVS are: i) an integrated, flexible and collegial organization, aiming at high-quality scientific outputs; ii) the quality/differentiation of human resources, focused on a small number of topics with high critical mass; iii) the connection to health care institutions – namely through the Clinical Academic Centre – Braga, Association (2CA-Braga) - reflected in the clinical scope of its research and the training of physicians; iv) the interaction with research groups in the areas of technology, particularly within the context of the ICVS/3B’s Associate Laboratory (AL).

The ICVS/3B’s-PT Government Associate Laboratory

The ICVS/3B’s AL was launched in 2011 to produce highly competitive research in the interface Health Sciences/Technologies, pursuing the goal of expanding the boundaries of current knowledge and developing translational activities on innovative prophylactic, diagnostic and therapeutic solutions.

The Clinical Academic Centre – Braga, Association (2CA-Braga)

The 2CA-Braga results from a partnership with the Grupo José de Mello Saúde/Braga Hospital and the Eurotrials, aiming at develop clinical research, including clinical trials in collaboration with international industrial partners. The 2CA-Braga combines a team of researchers, physicians and other health professionals, to which is associated a team of project managers, nurses and clinical trials coordinators/monitors, ensuring a professional management of the 2CA-Braga.

A detailed description of the ICVS activities and achievements during 2015 is reported in the *ICVS Annual Report 2015* (see Supplementary Reports). In this section of the ECS report, we summarise below the main achievements attained in 2015.

ICVS Human Resources

In 2015, the ICVS kept actively involved in R&D activities a differentiated research team, pursuing a strategy of reinforcing the productivity of the body of PhD members (the actual number was reduced to 79). The total number of ICVS members is 267, including 79 PhDs (36 ECS Faculty, 2 Faculty from collaborating institutions, 13 Assistant Researchers and 28 Post-Docs) and 188 post-graduation students (96 PhD students, 32 Master students and 60 research assistants), supported by 24 non-academic staff (8 administrative and 16 specialized technicians, with salaries supported by the ECS).

ICVS Financial Resources

As an important achievement, during 2015 the ICVS significantly increased the amounts for research projects obtained through competitive funding. Indeed, the new research projects granted included: 11 projects from FCT (1 million €); 3 project in the context of NORTE 2020 Program (6.5 million €); Private Foundations and Industry (0.6 million €); 6 projects from other international sources (0.3 million €); and 2 projects from other national sources (0.02 million €).

In 2015, the sums involved in ongoing projects (3 years average) corresponded to 9.3 million €, of which 2 million € were used for 2015 activities.

In 2015, industry-sponsored R&D was also performed in areas of mutual interest between sponsors and the ICVS research domains, involving TECNIMEDE; Fundação BIAL; and BIOGEN.

ICVS Infrastructure

At the ICVS facilities, all the scientific equipment from the installed technological platform is shared amongst Research Domains. In addition, this equipment is also available under request to the other research units of the University of Minho and to the Portuguese scientific community in general. Specifically, the ICVS provides: fully operational Functional Cores for Animal Housing, Microscopy, Histology, Molecular Biology and Endoscopy/Minimally Invasive Surgery, and Shared Technical Facilities for Cytometry, Cell and Tissue Culture, Bio Banking, Electrophysiology and Biosafety Level 2 and 3. Some of this Functional Cores, such as histology, microscopy and animal housing also provide external services.

A critical achievement in 2015 corresponded to the completion of the construction of the “Biotério” animal facility. The lack of an animal facility with the required capacity has been a major bottleneck of the ICVS in past years. This constraint is now solved with the construction of the “Biotério” in the adjacent area of the ECS/ICVS building.

In addition to the accomplishments reported above, regarding Financial Resources and Infrastructures, the following major achievements were also attained in 2015:

- Growth in the impact of the ICVS scientific outputs, reflected in the significant increase in the number of international publications.

During 2015, the ICVS was able to publish a total of 172 papers in international peer-reviewed journals (referenced in ISI, Scopus or in Pubmed), in addition to 16 international book chapters and 162 communications and proceedings in international congresses. Among the articles published in 2015, 168 were produced within the three research domains (Microbiology and Infection, Neurosciences and Surgical Sciences), corresponding to 79.2% in Q1-Q2, with 56% in Q1, and average Impact Factor (IF) of 4.53; and 4 additional articles in the fields of Medical Education and Public Health.

- Increase in the number and in the impact of the clinical studies developed in the 2CA-Braga.

The 2CA-Braga has developed clinical research with a growing impact, with 35 clinical trials ongoing in 2015, assuming a leading position in the national context, with around 30% of the clinical trials run in Portugal. Additionally, the 2CA-Braga developed 42 clinical studies, including research projects in partnership with the ICVS and other research units from the UMinho, observational studies and validation of medical devices.

- Obtain 13 National and 12 International scientific awards.

The international awards included: ECNP Junior Scientists Symposia Invited Speaker, Amsterdam; Grant for the ECNP Workshop of Neuropsychopharmacology for Junior Scientists in Europe, Amsterdam; SPIE Medical Imaging 2015, Orlando, USA - Best poster Prize; SPIE Medical Imaging 2015, Orlando, USA - Honorable mention; 47th Annual Meeting of Canadian Association of Paediatric Surgeons, Niagara Falls, Canada - First Prize Winner for podium presentations; and COST Mye-Uniter - Best Poster Award. Additionally, the prestigious Portuguese award “Prémio Novo Banco” – Prémio Nacional de Inovação 2015, was granted to the project “Stent biodegradável”.

- Approval of two applications in the context of the call “P2020 PhD programs”, as referred in the section of Post-graduation, which represent about 0.5 M € for the 8 students to be admitted next year.

4. ARTICULATION WITH THE NATIONAL HEALTH SYSTEM

As detailed in previous reports, the ECS has set up an innovative articulating strategy with the several institutions within (and beyond) the National Health System. The key element of the strategy is the multi-center approach based on inter-institutional partnerships within the legal framework concerning the articulation between the Medical Schools and the Health Services, a legal document (*Portaria 36/2002*). The ECS is institutionally articulated, under the terms established by law, with the Regional Health Administration - North (ARS-N) and more specifically with *Hospital de Braga, Centro Hospitalar do Alto Ave - Unidade de Guimarães, Unidade Local de Saúde do Alto Minho - Viana do Castelo/Ponte de Lima, Hospital de Barcelos, Hospital Pedro Hispano (Matosinhos), Hospital Joaquim Urbano (Porto), Hospital CUF Porto, Hospital da Arrábida, Casa de Saúde do Bom Jesus (Nogueiró – Braga)* and with Health Centres in the Northern Regions of Portugal.

Throughout the years, these partnerships have consolidated, in its multiple dimensions: i) pedagogical activities, through a high-standard and increasing involvement of health professionals in the ECS; ii) research activities, as evidenced by the number of attending physicians engaged in academic and research activities and by the creation of Clinical Academic Centres; and iii) assistance care level, by the number of ECS faculty members with dual affiliations with these health care institutions. Importantly, in a setting of consolidation is that observation that the level of commitment with academic activities has persisted, despite the increasing number of editions of the medical degree. The renewal of the clinical staff involved in academic activities has also progressed at a steady level and the quality of the clinical teaching continued to be recognized by students and physicians, and the presence of the students in the affiliated hospitals continues to be extremely well appreciated.

The coordination of this interplay by the Coordinating Committees ("*Comissões Mistas*") has been very efficient. The Committees are appointed to decide on matters of relevance for the coordination of activities between the ECS and the Health Services. The established Committees have adopted a Protocol that proved to be very efficient and became a central piece for the development of an efficient inter-institutional collaboration. This Protocol defines the model of cooperation (namely the Clerkship coordinating groups) in what concerns the clinical training of the medical students. These regulations cover the basic guidelines for the participation of the Health Services in the undergraduate clinical training, the competences and responsibilities of each of the participant institutions, and the term of office of the clinical supervisors and of the clinical tutors.

The Clinical Coordinating Groups, Supervisors, Tutors at Affiliated Hospitals and Health Centres are listed in Appendix III.

5. ECS GOVERNING BODIES, SUBUNITS AND COORDINATING BOARDS

At present the main governing bodies, subunits and coordinating boards of the ECS are as follows.

Governing bodies

- The School's Council
- The School Presidency (President and Vice-Presidents of the School)
- The Scientific Council
- The Pedagogical Council
- The Advisory Council of the School

Coordination boards

- The Course Committees for Master and Doctoral Programs
- The Coordination of Post-graduation

The School subunits

- The ECS Scientific-Pedagogical Subunits: the Scientific Areas
- The ECS Research Subunit: the Life and Health Sciences Research Institute

The competences and the present composition of these bodies and boards are presented in Appendix I.

6. HUMAN RESOURCES

Academic staff

As stated in former reports, the School is paying careful attention to the recruitment and promotion of academic staff. For that purpose, the ECS has established its own benchmarks/recommendations for academic progression, which are known by all members of the faculty (and by those that express their interest in joining the faculty). It is important to assure that the selected candidates have an adequate understanding on the institutional project and commit to contribute to the development of its specificities, namely in what concerns seven essential aspects: (i) the perspective of the program, as a project to be constructed and developed in a participated way within the School; (ii) the student-centred learning process, in which the traditional formal lecturing loses most of its significance; (iii) the horizontal integration of the curricular contents and the modular organisation of the curriculum, with the consequent transfer of management competences from individual subjects to the coordinators of the curricular areas or modules; (iv) the relevance of students and peer assessment, permanent monitoring and quality assurance; (v) the role of the Medical Education Unit, in terms of support, coordination and monitoring of the educational objectives; (vi) the role of research, as a crucial element for a research-based learning process, and (vii) the

engagement in research activities (including submission of the research projects to the strategic guidelines and priority areas defined for the ICVS).

The Medical Education Unit has established annual faculty development programs to target newly admitted staff and continued training for the existing staff. The program is based on workshops, supplemented with small team activities and informal discussions that create opportunities for addressing individual issues.

In the academic year 2015-2016, the School has a faculty of 80 members (40.15 Full Time Equivalent) of which 49 are PhDs. The faculty includes: 5 Full Professors, 11 Associate Professors, 3 Assistant Professors and 61 invited teachers (1 invited Full Professor, 3 invited Associate Professors, 28 Assistant Professors and 29 Invited Teaching Assistants). Additionally, the ECS counts with 2 Permanent Invited Professors, 9 Visiting Professors and many other collaborators particularly related to the Clinical Residences. The full composition of the regular teaching staff is listed in Appendix II, together with their qualifications, academic/hospital position and scientific area (for a matter of precision, the academic position is indicated in Portuguese). The Clinical Supervisors and Tutors who supported the clinical training of the students in the Hospitals and Health Centres during the academic year 2015-2016, in a total of around 600 clinicians, are listed in Appendix III. In terms of the faculty profile, it is important to highlight that 76.25% (61 out of 80) of the regular staff members are MDs.

Sabbatical Leaves

In academic year 2015-2016, the following faculty member benefited from Sabbatical Leaves:

- Fátima Baltazar, at Molecular Oncology Center, Cancer Hospital of Barretos, São Paulo, Brazil (from 01-09-2015 to 31-08-2016).

Non-academic staff

Appendix II presents the non-academic staff members, in a total of 41, and their qualifications, position and allocation. The academic profile of the staff is above the average situation in the Portuguese higher education system (73.17 % of the staff have a higher education degree). It also deserves to be mentioned that part of the staff is allocated to the research institute, given that the ICVS cannot hire personnel; this represents a significant effort from the ECS to guarantee the best possible conditions for the research activities in the ICVS and an important challenge for the future. The ECS is proud to say that a great care has always been given to assure that every member of the non-academic staff can also undergo educational activities to improve their qualifications.

7. FINANCIAL RESOURCES

Since 2000, within a contractual program established with the University, an annual budget has been allocated to the ECS to cover overall expenses (salaries, current expenses and equipment). The initial budget allocated to the School in 2016 was of 5.418 million Euros. This sum represents an increase in the ECS budget as compared to the previous years and results from a new algorithm used by the UMinho rectory to allocate the budgets among all the university schools, contributing to a more transparent allocation of financial resources. Additionally, the ECS is waiting for the transference from the rectory of an additional sum that corresponds to the increase in salaries to be returned to public servants salaries in 2016.

In the meanwhile, the ECS and the ICVS continue fostering the strategy of increasing and diversifying additional sources of funding. As a result of this effort, a significant amount of external/competitive funding was obtained, particularly from the CCDRN (Norte 2020) and international institutions and industries.

8. PLANS FOR 2016-2017

The project of the ECS has been well established and progressing as planned. The major goal for the near future is to keep a permanent commitment to the benchmark of quality at the highest international level. Thus, we pursue continuous improvement, seeking to assure the best conditions to reinforce the ECS dynamism.

At the educational level we will reinforce our commitment to:

- maintain the educational quality of our programs;
- expand our pedagogical offer with the development of an International Program;
- adjust and implement new pedagogic methods, namely “team-based learning” in specific area of the study plans;
- continue developing the best practices of medical assessment, with the collaborative effort with the National Board of Medical Examiners (NBME-USA) and the European Board of Medical Assessors (EBMA). There is a commitment to adjust the existent, and to explore new, assessment tools that better reflect the acquisition of medical skills; these actions will proceed in parallel with the efforts in medical education research in this topic. This will be complemented with an effort to assure the quality, and subsequent certification, of the assessment process;
- prepare for the accreditation exercise to be promoted by the national Accreditation Agency (A3ES) to take place in 2015-2016;
- reinforce our management structure for the pedagogic activities;

- reinforce the support to the longitudinal acquisition, training and assessment of clinical and laboratory skills, using well-established, but also innovative, methods and tools;
- further the structuring and organization of medical residence training program and clinical fellowships programs, as well as the development of new collaborations with our health-care partners, particularly through Clinical Academic Centres, and also fostering new collaborations with other research partners and several industrial partners;
- continue the internationalization of the ECS project, namely through the establishment of new partnerships with other prestigious medical schools around the globe, participating in several international collaborative efforts;
- define strategies for the renewal of the FCT-PhD programs that formally end in this academic year;
- maintain the offer of high quality advanced training and certification in additional national and international agencies/medical associations.

The construction and consolidation of the ECS pedagogical project will continue in parallel with the capacity of ICVS to perform internationally cutting-edge research. We will reinforce our commitment to:

- equip the new Biotério, animal facility building, with equipment for animal housing/maintenance and laboratory animal science;
- consolidate the Pilot Research Lines on Community Health and on Education on Life and Health Sciences, in the context of the ICVS;
- explore new perspectives for the expansion of our research activities within the context of ICVS/3B's AL;
- continuing expanding clinical research through the 2CA-Braga, in collaboration with national and international industrial partners, particularly by setting up a phase-1 clinical trial infrastructure;
- foster the interaction with the spin-offs in the perimeter of the ECS/ICVS to create new products with potential impact in healthcare and in the creation of value.

The above plans, we believe, will have impact on the recruitment of the students/ researchers/ academics and also on more sustainable and diversified funding sources.

9. FINAL REMARKS

In summary, it is our belief that the core strategies and goals of the ECS for 2015-2016 were successfully accomplished. The most prominent strengths continue to be: i) the quality of the training of medical students and the reported high standards of their performance in healthcare institutions as physicians; ii) the quality

of the research activities on-going at ICVS within the ICVS/3B's AL; iii) the innovative post-graduation activities and iv) the recognition of the ECS project in all its dimensions at the international level. Such strong points have translated into a very favourable teaching and research environment at the ECS. The systematic monitoring of the project by a strong and informed leadership and by continuous external evaluation continues to be the premises needed to keep the ECS on the right track.

Certainly the success of the ECS project has only been possible by combining the appropriate mixture of competence, enthusiasm, commitment and team spirit. A strong word of praise and gratitude is due to all that have contributed to the ECS project. We assure that we will pursue our mission with the same determination and enthusiasm.
