



ENGLISH  
VERSION

# Institut Municipal d'Assistència Sanitària

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IMAS

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d'Assistència Sanitària**

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***For more information on the activities of IMAS and its centres,  
visit our website at: [www.imasbcn.org](http://www.imasbcn.org)***

The IMAS, during 20 years of existence, has shown that a public healthcare management that is modern, of quality and close to the public is possible. These are the three basic points around which our commitment and our work revolve.

The incorporation of state-of-the-art technology for developing diagnostic and treatment tools is an example of the IMAS's determination to continue making advances in improving healthcare. In this regard, I would like to highlight the considerable investment made in equipment, such as that of the new Hemodynamics Unit at the Hospital del Mar, the renewal of the radiodiagnosis equipment at the Hospital del Mar and the Hospital de l'Esperança and the growing use of molecular biology techniques. However, it is also important to highlight the significant introduction and use of information technologies at IMAS hospitals, which have earned public recognition and received the National Prize for Information Technologies and Health, awarded by the Spanish Society of Health Information Technologies.

Furthermore, advances made in the field of oncology, one of our priority lines of work, have been concentrated in projects with a significant social impact: the Rapid Diagnosis Programme, in close coordination with Catalonia's primary healthcare and oncological healthcare systems, has been implemented with the intention of opening up new, faster routes of access, with preference for those oncological diseases most prevalent amongst the population and the setting up of functional units for breast cancer and colo-rectal cancer. The aim is to guarantee continuity of care and maximum treatment efficacy and speed, whilst coordination criteria have been incorporated that mean the views of all professional staff involved in oncological treatment can be accessed.

As for mental health, at the Institute of Psychiatric Care (IAPS), the extensive experience of our professionals in the diagnosis and treatment of mental disorders is combined with the aim of offering more accessible care. At the same time, investments have been made in structural improvements at the hospitalisation units of the Psychiatric Institute (IMPU), leading to a substantial improvement in the comfort of both patients and professionals.

In terms of social assistance and healthcare, I would like to underline the historical will of IMAS to integrate care for the elderly. In this aspect, the creation of the Institute for Geriatric Care (IAGS) has been key for giving a response to growing needs in this sphere. IMAS has always shown a vocation to provide comprehensive care for the aged; therefore we have great experience in this field and are in the best position to tackle the health problems of elderly people. However, above all, I am delighted to highlight the start of building work on our new Social and Healthcare Centre, very close at hand, in the Forum area, which will bring together the main lines of care, teaching and research in neurosciences from the Institution's hospitals.

Meanwhile, in the biomedical research field, the prestige and high profile of the research being carried out at the IMIM have been made clear through the major role it has achieved in human genome research; in the increase in scientific publications from our professional experts; and in the leading position attained in research networks in areas such as epidemiology, public health, children's health and the environment, and others that are equally important. Along the same lines, the creation of a research unit and a doctorate programme in Cognitive Neuroscience again show the Institution's significant presence in one of the foremost areas of neuroscientific research.

Moreover, the birth of the Barcelona Biomedical Research Park Foundation, whose members include the IMIM, the Genomic Regulation Centre (CRG) and the Pompeu Fabra University (UPF), shows our commitment to reinforcing the role of Barcelona and Catalonia in the sphere of biomedicine and the health sciences. This Foundation has been set up with the manifest objective of favouring the coordination, promotion and management of postgraduate research and teaching carried out at the scientific research centres that will be a part of the future Barcelona Biomedical Research Park (PRBB).

In the sphere of cooperation, I would like to highlight two important initiatives that take the IMAS into orbit amongst innovative projects in the sector: the agreement with GSK to establish a Centre for Imaging in Psychiatry, for developing projects based on R&D of new medicines in the area of psychiatry, and the strategic agreement reached with the Clínic Healthcare Corporation for the establishment of strategic alliances based on complementary resources, functional coordination, and the improvement of efficiency and quality.

The important teaching vocation of IMAS is confirmed year after year with over 1,000 students attending our medicine, biology, nursing and vocational training classes. However, I would also like to underline its position as a reference point in the healthcare sector for the courses, conferences and congresses organised by our professional staff: the 31st Course on Antibiotic Therapy, conferences on breast cancer, symposia from the anaesthesiology service, and courses on the menopause.

Finally, I would like to thank all the staff of the Institute for their contribution and involvement in different projects and improvement programmes, but above all for their human qualities. In this regard, all of those of us who work in public services and institutions have an additional responsibility, because as well as exercising our profession in an appropriate way, we have to represent, before the public, the values of austerity, honesty and rigour, values that are necessary to achieve a work ethic of public service and dedication to citizens.

**José Cuervo i Argudín**  
Chairman of the IMAS

## Emergency network for better service

*We coordinate with the city to give the best response to urgent health problems.*

The IMAS has four facilities that act as an “entrance door” to our healthcare centres for cases without a prior appointment and acute cases. This emergency service is provided at the Hospital del Mar, at the Peracamps Centre, at the Hospital de l’Esperança and at the Psychiatric Institute.

■ ALWAYS CLOSE TO THE PUBLIC. Currently these centres can attend adequately to the demand for emergency services from the population in the areas they serve, just as the major city hospitals respond to them. In addition, the IMAS emergency service points are notable for their high degree of coordination with the continuing care and emergency care facilities offered by the primary healthcare system, within a context of more rational utilization of these services.

■ COORDINATED TO TACKLE THE WINTER. The Winter Plan is a set of actions introduced at IMAS hospitals within the framework of the Comprehensive Emergencies Plan of Catalonia (PIUC), to respond to the increase in demand for urgent attention that occurs in the winter, because of health conditions related with the cold and the worsening of chronic illnesses. The Hospital del Mar, with the aim of taking on the most ideal healthcare resource to each patient, coordinates with different healthcare facilities in Barcelona to offer adequate cover for citizens’ needs. The healthcare facilities that participate in this coordination are:

- 061
- CAP (Primary Healthcare Centre) Barceloneta
- CAP (Primary Healthcare Centre) Gràcia
- CAP (Primary Healthcare Centre) Vila Olímpica
- Transport Sanitari de Catalunya
- Hospital de l’Esperança
- Hospital de la Creu Roja
- Hospital Evangèlic
- Clínica Plató

■ MORE CONFIDENCE, MORE ACTIVITY. The best evidence of the confidence that the public have in the emergency services is the increase in visits to the emergency care facilities at all our centres, with activity growing steadily since the year 2000. We have attended to a daily average of 400 people through our Emergency Services, with a total of

148,407 emergency cases treated in 2002, some 2.4% up on the previous year.

Remodelling of infrastructures and better coordination with the district’s basic departments mean that the Emergencies Service at the Hospital del Mar has become consolidated as a point of reference for the districts of Ciutat Vella and Sant Martí.

## Outpatient visits: specialists closer to the public

*We are incorporating new ways of attending to people that mean closeness and convenience for patients.*

■ EXTERNAL REFERRALS. The external referrals department maintained a constant flow of visits throughout the year. With respect to the previous year, a growth in activity has been observed of 9%, which is explained by the improvement in connections between the different medical services and primary healthcare, which works as a filter for different health problems and their degrees of complexity.

■ SUCCESS OF THE DAY HOSPITALS ALTERNATIVE. The Digestive Day Hospital has been incorporated into our offer of complex care under a day hospital regime. A growing number of visits has been seen in this area, which means a reduction in the number of admittances for longer stays and an improvement in patient comfort. The day hospital area also offers greater accessibility to information for patients with serious conditions and to medical staff for their families.

■ IMPROVING THE RELATIONSHIP BETWEEN HOSPITALS AND PRIMARY HEALTHCARE CENTRES. Continuing with the progression of the specialised healthcare programme that began in 1994, the IMAS has consolidated relations with the primary healthcare areas in the districts served (Ciutat Vella and Sant Martí). Based on the experience acquired in these new, already consolidated areas, in shared procedures and in information flows, the current challenge is to extend the experience to new areas, making greater inroads into the hospital-CAP relationship. The proof lies in the growing activity of specialists in the basic areas, in terms of both appointments and consultation activity with medical staff; it has nearly doubled in just one year, with 16,140 first visits and 30,265 follow-up visits in the year 2002.

■ **SPECIALISED HEALTHCARE AT THE CAP BESÒS.** In the year 2002, specialised healthcare was extended to the CAP Besòs, a primary healthcare centre catering for over 25,000 inhabitants. This represents an important percentage of the work of our medical professionals in the districts, given the large population of the new region to be covered.

This area, currently a focus of attention for the city owing to its closeness to the Forum 2004 and situated within our catchment area, already has a weekly presence of specialists in Rheumatology, Cardiology, Gastroenterology, Endocrinology and Chest Medicine from the Hospital del Mar.

■ **THE KEYS: CLOSENESS TO THE PUBLIC AND COORDINATION BETWEEN PROFESSIONALS.** Increasing the scope of specialised healthcare requires not only important investments with regard to the staff involved, but also special dedication to achieve good relations with primary healthcare doctors. In this respect, intense work is being done to improve the effective and fast coordination of consultations and hospital referrals, and the creation of protocols to achieve consensus on decisions or treatments for those cases being treated jointly between general physicians and specialists.

## More surgical interventions, fewer delays

*We are improving organisation to reduce waiting lists.*

■ **WE CONTINUE IMPROVING.** Research and practice in new surgical techniques and the evolution of technology allow new possible cures to be included and less risks in surgical interventions, even though this also opens the door to a greater volume of people to be treated. For this reason, we have worked to improve our organisation and selection criteria in order to achieve reasonable waiting times and growing improvements in this aspect year after year. In 2002, around 12,400 major surgical interventions were carried out, some 4.3% more than in the previous year.

■ **CRITERIA PRIORITISATION PROGRAMME.** One of the programmes introduced to rationalise waiting lists was that of surgery urgency evaluation. The criteria used took into account the severity of the case in addition to social and family factors, which in certain cases are the main complications when awaiting surgery.

■ **MUCH SHORTER WAITING LISTS FOR OPHTHALMOLOGICAL SURGERY.** In the last year we placed special emphasis on improving the waiting list for ophthalmological surgery, which led to a drastic reduction in the time necessary to operate, from 16 months in the year 2000, to 8.5 months in the year 2001, and to 3.8 months in 2002.

## Sexual and reproductive health: a growing demand

*Information, advice and healthcare increasingly go together.*

■ **INCREASE IN ACTIVITY AND INTERNAL REORGANISATION.** In the year 2002, sexual and reproductive health services maintained a high level of activity and the process of integrating services across the different areas has continued. In this context, the Gynaecology and Obstetrics service has merged with the primary healthcare facility that the IMAS has developed for the Ciutat Vella and Sant Martí areas.

■ **INCREASED DEMAND FOR OBSTETRICS TREATMENT AMONGST IMMIGRANT WOMEN.** During the year 2002, over 1,200 women entrusted control of their pregnancy and giving birth to the Hospital del Mar, an increase of 11.3% over the previous year. A growing percentage of women attending are immigrants, a group which in just a few years has become one of those with the largest demand for gynaecological treatment. The healthcare offering also includes the Mother's School and Healthcare Education about babies.

■ **SEX EDUCATION FORMS PART OF OUR YOUNG PEOPLE'S EVENINGS.** Our vocation to teach about and divulge information on sexual relations and contraception is currently a focus at our Young People's Evenings, where teenage boys and girls can ask questions in an open and relaxed atmosphere, with health professionals covering an important informational void in a detailed and personalised way.

## An integrated approach to oncological care, a priority line of work

*We are opening new roads for direct, fast and preferential access to oncological services.*

■ **RAPID DIAGNOSIS SERVICE.** In line with the initiative from the Barcelona Health Consortium, and in close coordination with the primary healthcare and oncology services of Catalonia, in 2002 a rapid diagnosis programme in oncology was launched. The objective is to create a new access route that is direct, fast and preferential for priority health problems. The IMAS was selected in this first phase thanks to the optimum development of the reform of its specialised care within the primary healthcare facilities reformed in its area. The first diseases that have entered the programme are breast cancer, colo-rectal cancer, prostate cancer and lung cancer. The initial results show us that 18% of cancers diagnosed at the IMAS were diagnosed based on the rapid diagnosis programme.

■ **GENETIC DIAGNOSIS.** Concern for oncological syndromes that may have a hereditary component, such as breast, ovary and colo-rectal cancers, has led us to design a genetic advice unit specialising in early determination of the possible scope of these diseases in family groups.

From the pre-advice to diagnosis and monitoring stages, this complex and important problem requires specialised units such as this one, where each case is treated in an independent way with an integrated approach, with the coordination of clinical, analytical, pathological, cytological and genetic diagnoses.

■ **BREAST CANCER SCREENING PROGRAMME.** Now in its eighth year of existence, in 2002 the Screening Programme carried out a total of 15,321 mammographies in the districts of Ciutat Vella, Sant Martí, Gràcia and Sarrià-Sant Gervasi. At the current time, the programme is serving a target population of 60,000 women, which represents 35% of the women in the city of Barcelona in the 50 to 69 age group, and it has diagnosed 77 cases of breast cancer, of which 62 have received conservative treatment.

In parallel, we can say that the Programme maintains a leading position in our territory in terms of scientific studies, evaluation of results, state

of expertise and application of the latest research contributions in the field of breast cancer prevention.

■ **FUNCTIONAL UNITS FOR BREAST CANCER AND COLO-RECTAL CANCER.** Services for complex oncological cases, such as colo-rectal cancer, have been the focus of organisational work in 2002, with the creation of a colo-rectal cancer unit. This unit coordinates different medical and surgical specialities, such as Gastroenterology, General Surgery, Oncology, Pathological Anatomy and Radiotherapy, in order to guarantee treatment continuity and maximum efficiency and speed in the treatment of patients, from the first suspicion of cancer through diagnostic tests, intervention and treatments.

This unit has enough autonomy to mobilise and develop the treatment process for each patient, from the bed reservation so that the spread of the cancer can be studied within a minimum time (from two to three days) to the programming of surgery, multi-disciplinary discussion of the case, and information accessibility for the patient and family. It is hoped that the results of the unit's launch will confirm a shorter resolution time, together with a perception of quality of service on the part of users.

■ **NEW GENERAL AND DIGESTIVE SURGERY PROJECT.** Finally, also worth highlighting is the launch of a new project by the General Surgery and Digestive Pathology Services, in order to carry out joint and coordinated treatments for illnesses that require urgent surgical intervention, with special attention being paid to hepatology. For this programme a specialist gastroenterologist who works in both fields has been incorporated, and this facilitates the fluidity of circuits ensuring maximum speed of these processes.

■ **THE IOR: INSTITUTE OF RADIOTHERAPEUTIC ONCOLOGY.** During the year 2002, the Institute of Radiotherapeutic Oncology has developed its Business Plan and was also equipped with a Communication Plan, as a tool for identification. The programme of objectives for the year, established independently in line with criteria agreed by the staff of the Institute itself, has led to an optimum activity rate, with 1,745 sessions, greater treatment complexity, an increase in care quality, and a high level of satisfaction from users, of whom 96% would recommend this service.

## Mental health: more activity and better quality

*Bringing psychiatric services closer to citizens and offering greater proximity of care.*

■ **INCREASES IN PSYCHIATRIC CARE PROVIDED.** The setting up of the Psychiatric Emergencies Service at the Hospital del Mar in the year 2001 has led to an increase in attention to urgent psychiatric cases of 47%.

Moreover, its experience in treating patients with dual pathologies has converted the substance abuse detoxification programmes into a reference point for the city of Barcelona. In this regard, the IMAS substance abuse detoxification programme includes complete or partial hospitalisation of substance addicts or dual pathology patients, a substance abuse drop-in clinic and a methadone programme.

■ **COORDINATION WITH THE 061 SERVICE.** The IAPS has carried out work on the coordination, training and complementation of the 061 medical emergencies service in order to improve attention provided for psychiatric emergencies in the city. Firstly, it has trained the 061 telephone response team in order to give a better response to certain psychiatric demands, and secondly, part of the IAPS staff are either directly in attendance or locatable whenever necessary.

■ **IMPROVEMENTS AT THE MUNICIPAL PSYCHIATRIC INSTITUTE.** The Municipal Psychiatric Institute (IMPU) underwent structural improvements during the year 2002, with the reform of a surface area of 750 m<sup>2</sup> which has meant an investment exceeding 254,000 euros. The works have affected two IMPU hospitalisation units and are currently in the third phase of execution. These alterations will mean an improvement in living conditions and comfort levels for patients and staff, with the refurbishment of corridors, common rooms and nursing control areas.

## Geriatrics, a response to growing needs

*We are promoting personalised and integrated geriatric, social and health care.*

■ **DIVERSIFIED SERVICES.** The Institute of Geriatric, Social and Health Care (IAGS) offers clinical and diagnostic services and treatment in an interdisciplinary context for elderly people and people with chronic illness, or those who are terminally ill and require social assistance and healthcare. The Geriatric Centre is where long term geriatric and psycho-geriatric activity, the short stay unit and the assessment, therapeutic and maintenance day hospital are all located. At the Hospital de l'Esperança there is a convalescence service with beds for palliative treatment. At the same time, the Hospital del Mar is fomenting activity in terms of geriatric, social and health care.

In the year 2002, the IAGS increased its number of admissions by 47%.

■ **TRANSFER OF THE CONVALESCENCE UNIT TO THE HOSPITAL DE L'ESPERANÇA.** The Hospital de l'Esperança has become key for attending to cases of sub-acute pathologies that still require an important degree of care and monitoring. In the year 2002, the Convalescence Unit was transferred from the Hospital Geriàtric to the Hospital de l'Esperança, to improve synergies with the Rehabilitation Service.

■ **INTERDISCIPLINARY SOCIAL AND HEALTH FUNCTIONAL UNIT (UFIS).** The UFIS, part of the IMAS, is formed by geriatric specialists, specialised nurses and social workers. During the year 2002, it attended to 1,022 consultations. This figure shows us the degree of importance of this unit within the healthcare context, as it has experienced an increase of 27% in its activity compared to the previous year.

■ **25 YEARS OF THE GERIATRIC CENTRE: THE EVOLUTION OF THE HEALTHCARE MODEL.** In the year 2002, the Municipal Geriatric Centre celebrated 25 years of existence, which meant an opportunity to review the healthcare and organisational changes that have taken place over that time. From the asylum concept to the treatment of old age in an integrated way, catering for pathologies and psychological and social components, aspects that require special treatment at different times in the healthcare of each person.

## The Forum Centre: the immediate future for geriatrics and mental health care

*The Forum Centre will bring together the main lines of treatment, teaching and research in neurosciences from the IMAS hospitals.*

■ THE FIRST BRICK. Works on the Hospital del Mar's Forum Centre, which are planned to be completed in 2004, started in 2002 with the ceremony to lay the first brick held on 20 September. The works are progressing at a good pace, leading to great enthusiasm about the forthcoming launch of a new and exciting project addressing the population of the district of Sant Martí and of the whole city.

■ A MAJOR BUILDING. The planned building is located in the catchment area of the Hospital del Mar and will therefore bring geriatric and mental health services closer to the community, whilst strengthening the connection between the social health services and the hospital.

The building will have five storeys and a sub-basement, and will occupy a built surface area of 16.000 m<sup>2</sup>, with approximately 200 health professionals working there. Investment in the project totals 22 million euros. In addition, it should be highlighted that this will be an efficient and environmentally-friendly building, connected to a heating and cooling system that will be built for the entire neighbourhood.

■ SPECIALISED HEALTHCARE. The services to be found there will be those commissioned by Catsalut and in the hospital's strategic plans, in order to respond to the evolution of the needs of the population for which it caters. This fact will mean, in practice, the opening of beds allocated for geriatric patients and those with neuro-degenerative disorders such as Alzheimer's disease and other dementias and mental illnesses in a sub-acute phase.

## Locomotive System Unit: promoting patients' autonomy

*Surgical and rehabilitation treatments are increasingly resolving cases and facilitating the reincorporation of patients into their normal activities.*

■ LOCOMOTIVE SYSTEM UNIT (UAL). Constant ageing of the population, changing lifestyles and the possibilities offered by new surgical techniques

mean that attention to disorders affecting the locomotive system is in the front line. The mechanical pathologies produced by sedentary lifestyles or the ageing of the skeleton, the implanting and changing of prostheses and work on post-trauma recuperation are some examples of the growing activity of the Locomotive System Unit, which in the year 2002 grew by 14%, with 1,560 more people visiting than in the previous year.

■ THE IMPORTANCE OF REHABILITATION FOR PATIENTS' REINCORPORATION INTO DAILY ACTIVITIES. Moreover, in 2002, there was consolidation of the coordination processes between the Physical Medicine and Rehabilitation Service with all the medical and surgical services at the different centres that need support in rehabilitation for their patients. Work in hemiplegia, post-surgical recuperation, or exercises to be learned by rheumatology patients was dealt with by the rehabilitation team, which takes up the reins in the integration of patients into an improved quality of life after acute conditions.

■ FIRST STEP TOWARDS THE MERGER OF ORTHOPAEDIC AND TRAUMATOLOGY SERVICES. The introduction of global improvements based on staff enthusiasm and dialogue was reflected in 2002 in the constitution of the new IMAS Orthopaedic Surgery and Traumatology Service (COT), introduced at the Hospital del Mar and the Hospital de l'Esperança. This proposal for merging the services led to the incorporation of new professional staff and it has benefited from the support and experience of those who have been building up this service in recent years and have achieved its current level of clinical excellence. The new organisation has to reinforce that position and lay the bases for further development in coming years.

■ INCREASING ACTIVITY. The year 2002 saw staff dealing with 31,745 urgent traumatology visits and 3,719 admittances into hospital in the areas of the Locomotive System Unit –corresponding to the Orthopaedic Surgery and Traumatology, Rheumatology and Physical Medicine and Rehabilitation services– with 12,787 first appointments and almost 50,000 follow-up visits.

## Technology at the service of diagnosis and treatments

*Genetics-related technologies open the way towards an improvement in diagnoses and, therefore, towards preventive actions for certain illnesses.*

■ **IMPORTANT INVESTMENTS IN NEW EQUIPMENT.** Investments in equipment and areas dedicated to everything that represents support for diagnosis allow improvements in the service for users, through an increase in activity and the incorporation of new techniques. This is progress that needs to be constantly maintained.

Investments in medical equipment for diagnosis support totalled, 1,158,636 euros in the year 2002, with a further 1,561,083 euros spent on installations and works for creating or renewing infrastructures. In this period, equipment for cardiac catheterisation in the new Haemodynamics Unit, support instruments for operating theatres and for monitoring acute conditions, a new Doppler ultrasound machine, defibrillators, video-processors, digital retinography equipment and other ophthalmological equipment such as automatic campimeters and infra-red lasers were all acquired.

■ **NEW LABORATORY TESTS.** During the year 2002, new additions to the offering of laboratory tests were Down Syndrome screening in the first three months of pregnancy and BNP testing, and work began on a line of genetics and molecular biology.

■ **NEW INSTALLATIONS FOR THE HAEMODYNAMICS UNIT.** In the year 2002, the new Haemodynamics Unit was set up at the Hospital del Mar, with a new service for cardiac catheterisation. This is a completely modern unit that meets all space and equipment requirements in line with the most advanced technology available in this field, which currently places it at the highest level of services offered amongst all the units in our country.

Haemodynamics permits the anatomical and functional study of the heart via the insertion of a cardiac catheter that enables doctors to find out the state of the arteries and the extension of any disease affecting the heart, the heart valves and other heart conditions. This exploration is carried out using a local anaesthetic and often allows a treatment that helps eliminate artery blockages to be carried out at the same time.

■ **MOLECULAR BIOLOGY FOR GENETIC ADVICE.** Studies are being carried out revolving around hereditary breast and ovarian cancers, and studies of genetics in haematological cancer, for improving or fine-tuning the diagnosis in rather unclear cases of illnesses such as lymphoma or leukaemia. Breast cancer care will also be extended with the study of genes BRCA1 and BRCA2, which allows diagnoses to be more specific and improves personalised adaptation of the most effective treatments for each case.

The IMAS Tumour Tissue Bank received a ministerial grant of 120,000 euros for the purchase of -80°C freezers, control systems and apparatus for extracting genetic information.

## IDIMAS, the new diagnostic imaging institute

*The IMAS hospitals are involved in a wide-ranging equipment replacement scheme and in technical, organisational and teaching development.*

The creation of the IMAS Diagnostic Imaging Institute (IDIMAS), through a public services provision contract with CRC-Mar in January 2002, has meant notable growth in the institution's investments and the modernisation of radiological infrastructures, and has favoured better coordination between IMAS centres and external centres.

■ **TELERADIOLOGY 24 HOURS A DAY.** The setting up of IDIMAS has allowed us to develop teleradiology, with the connection of the Hospital del Mar through computer links to other CRC-Corporació Sanitària medical centres. In this way, diagnosis using teleradiology in real time, 24 hours a day, has been made possible. This advance means that a patient's radiology images can be examined remotely by a highly specialised radiologist at any time, and also that second opinions are available in especially complex cases. It is forecast that the Hospital del Mar's Radiology Service will receive around 1,000 radiological consultations from other hospitals in order to put them forward for the opinion of IDIMAS experts.

■ **MAJOR INVESTMENTS IN EQUIPMENT.** CRC-Mar has invested 1.06 million euros in radiodiagnosis equipment. This includes a new multi-slice spiral CT scanner, equipped with four rows of detectors. There are only two scanners with similar characteristics in the whole of Catalonia. This new CT scanner allows, amongst other things,

a reduction in the amount of radiation emitted, reconstructions in two and three dimensions, and the practise of complete volumetric and vascular studies. This equipment will serve over 12,000 patients in the Hospital del Mar's catchment area.

## Commitment to advanced technology in research

*The IMAS centres are progressively acquiring equipment and adopting organisational structures that will keep them positioned amongst the best centres in the country.*

■ **FIRST STEPS OF THE ADVANCED TECHNOLOGY INSTITUTE FOUNDATION.** The commitment to new technological additions materialised in the year 2002 with the creation of the Advanced Technology Institute Foundation. It is important to highlight the relationship between the preferential lines of healthcare and research at the IMAS with its investment endeavours. The Advanced Technology Institute was constituted as a private foundation promoted by the IMAS and CRC-Mar, part of the CRC Corporació Sanitària group, and it is the first institution to commence activities at the Barcelona Biomedical Research Park. Also to be highlighted is the incorporation of the Corporació Sanitària Clínic into the Foundation.

The investment that the Advanced Technology Institute will allocate to the PET-Ciclotró centre totals 7,300,000 euros. The financial funding comes from a long-term loan from the Ministry of Science and Technology, and contributions from the patrons. These important investments are intended to bring state-of-the-art technology to our users and they will contribute towards making Barcelona a strategic centre worldwide in the field of biomedicine and the life sciences.

■ **THE IMAGING IN PSYCHIATRY CENTRE.** In the year 2002, the Imaging in Psychiatry Centre (CIP) was presented. This is a clinical research centre located at the Hospital del Mar, and it was the result of an agreement with the pharmaceutical company GlaxoSmithKline (GSK), the CRC-Mar and the Advanced Technology Institute of the Barcelona Biomedical Research Park.

The CIP will work on the research and development of new psychiatric drugs through the technique of functional and biochemical neuro-imaging known as SPECT (Single Photon Emission Computed Tomography). This new technique allows the study of different aspects of brain functioning directly and

in an innocuous way, and offers the possibility of studying the causes of psychiatric illnesses, as well as the action mechanisms of potential treatments. The results are extremely important to the process of new drugs research and development for the treatment of these illnesses.

## At the forefront of information technologies applied to health

*The efficient management of healthcare information allows us to improve organisational models, speed up processes and optimise the dedication of our professional staff to patients.*

■ **INFORMATION SYSTEMS OF RECOGNISED PRESTIGE.** Our computer system provides a service for 1,100 PCs and 200 terminals distributed around the different IMAS hospital, teaching and research centres. It has access to one million medical records, 80 million analysis results since the year 1986, and 36 million records of medication prescribed.

During 2002 the IMAS received a special mention at the National Information Technologies and Health Prizes awarded by the Spanish Society for Health Information Technologies, as an organisation that has been outstanding in the implementation and use of information and communication technologies in the healthcare sphere.

■ **THE MEDICAL AND NURSING WORKSTATION.** During 2002, a new application for the Medical and Nursing Workstation was developed. It is based on complete computerisation of medical case histories. The pilot phase began on the hospitalisation floor of the Hospital de l'Esperança's rehabilitation service.

■ **RESEARCH IN BIOMEDICAL INFORMATION TECHNOLOGY.** The IMAS has a Biomedical Information Technologies Research Group (GRIB), with its headquarters at the Municipal Institute for Medical Research (IMIM). This work group is structured over five laboratories, one of which is a Medical Information Technologies laboratory, which for some years has been working on a broad programme of participation in high-profile national and international projects.

## Advanced level research

*Our research is in a leading position in Europe.*

■ **HIGH IMPACT PUBLICATIONS.** During the year 2002, the Municipal Institute for Medical Research (IMIM) produced 140 original research articles, published in 28 national and 112 international magazines. In addition, eight doctoral theses were read, and 136 books, chapters or reviews were written, 17 in international publications and 119 in national editions. The impact of this work places us amongst the most productive hospitals in terms of scientific publications.

■ **RESEARCH UNITS AND GROUPS.** The IMIM has six research units and seven research groups. The units are working on cellular and molecular biology, pharmacology, bone and articular physiopathology, lipids and cardiovascular epidemiology, respiratory and environmental health, and healthcare services. The groups, for their part, are carrying out research in anaesthesiology, auto-immunity, clinical and molecular epidemiology of cancer, biomedical information technology, experimental surgery, experimental and clinical mycology and psychiatry.

■ **A MAJOR ROLE IN HUMAN GENOME RESEARCH.** Findings in the field of genetics, which received a great boost with the participation in the sequencing of the human genome, have been developed during the year 2002 in different areas, with discoveries that allow us a glimpse of the future of medicine in the third millennium.

The start-up of research into genetic diagnosis and the possibility of finding out the gene –or genes– that mark predisposition towards suffering an illness, indicate a path to be followed that will make it possible to detect disorders long before they develop and carry out preventive actions with much greater effectiveness.

■ **RESEARCH SUPPORT SERVICES.** In the year 2002, the IMIM launched its Scientific and Technical services, a variety of services designed to give scientific and infrastructure support to researchers. These offer scientific advice, experimental areas of common use and advanced technology equipment associated with biomedical research. Highly qualified staff members are in charge of control and maintenance and provide the necessary technical assistance for optimum utilisation of these resources. These services are available to the IMIM itself and to the IMAS centres, as well as to some public institutions and

private enterprises with which prior agreements have been reached.

The Scientific and Technical Services offered include: laboratory animals and experimental surgery, methodological advice and statistical support, advice on biomedical publications, cold systems and cryopreservation, the radioactive materials handling laboratory and electron microscopy.

■ **EUROPEAN PROJECTS ON THE INCREASE.** Cooperation with institutions and the positioning of our research amongst some of Europe's most advanced, is one of the future challenges for research. In this respect, the number of European projects is constantly increasing and has grown from 16 studies in 2001 to 29 studies carried out with European collaboration in the year 2002.

## PRBB

*Works on the Barcelona Biomedical Research Park are progressing at a healthy pace.*

■ **IMPORTANT GRANTS WORTH 4.2 MILLION EUROS.** The prestige and high profile of the studies proposed by different research groups and units has led to support through grants and subsidies from different national and European institutions. Across all the IMAS centres this support has increased to an extraordinary extent in the last year, with a growth of around 50%. The total value of these subsidies in 2002 was 4,258,990 euros.

Recognition has also been obtained for research in different spheres, with the awarding of the first grants from the Ministry for Health and Consumer Affairs for research networks. On this occasion, the IMAS centres took part in six of the thirteen centre network projects, which were awarded a total of 2,905,319 euros. As for group networks, the IMAS is also participating in 13 of the 56 proposals underway out and is a leader in four: research into epidemiology and public health, research into childhood and the environment, the work of the Heracles Network on genetic and environmental determinants of vascular dysfunction in hypertension and ischemic heart disease, and the EPICUR-Network for the study of cancer of the urinary bladder.

■ **FINDINGS WITH IMPORTANT SOCIAL REPERCUSSIONS.** In 2002, a team formed by clinicians from the Hospital del Mar's Internal Medicine Service, the IMIM's Bone and Articular Physiopathology Research Unit and geneticists from

the Faculty of Biology of the University of Barcelona discovered a gene that determines people's predisposition to suffering from osteoporosis, a metabolic disorder that hinders the production of bone mass and affects some two million women in Spain. The study is original and was carried out exclusively using own staff and resources. During 2002, another outstanding piece of research carried out by the Hospital del Mar, the IMIM and the Higher Institute of Health in Rome, and published in the magazine *Medicina Clínica*, demonstrated that the children of smoking women amongst our population have a lower birth weight and are smaller than those of women who do not smoke during pregnancy.

■ PRESENTATION OF THE BARCELONA BIOMEDICAL RESEARCH PARK FOUNDATION. The interdisciplinary approach applied to research, teaching and innovation, will have a privileged space at the Barcelona Biomedical Research Park.

The Barcelona Biomedical Research Park Foundation was constituted in June 2002. The driving forces behind it are foundations attached to the Pompeu Fabra University (UPF), the IMIM and the Centre for Genomic Regulation; its main objective consists of developing a joint and cooperative organisation of the postgraduate research and teaching activities that are being carried out at the research centres that make up the Biomedical Research Park.

This Foundation will allow for establishment of a coordinated local policy and cooperation with postgraduate studies at the UPF, including the only master's degree in Public Health that is taught in Catalonia. In addition, it will benefit to the maximum from its position in an environment where scientists and healthcare staff work closely together, as it is located in the Hospital del Mar campus, a university centre attached to the Autonomous University of Barcelona. In short, it will allow laboratory research, clinical research and public health research to be linked.

## Teaching: training future professionals

*Strategies for the future bring together different resources under a common educational project in Health Sciences.*

■ OFFER OF SERVICES. The offer of services related with formal training is distributed between the IMAS Teaching Unit (for students of Medicine), Biology Studies at the Pompeu Fabra University (UPF), the University School of Nursing and the Bonanova School of Vocational Training.

The year 2002 saw the completion of the fourth year of studies of Human Biology at the UPF, a unique qualification in our field, and new teaching posts were announced at the IMAS Teaching Unit, with teachers from the UAB of Surgery and Dermatology and an associate professor of Dermatology

■ THE BONANOVA FOUNDATION. The Bonanova Foundation was created to promote and update vocational healthcare training through the promotion of new courses and the recycling of teaching staff. In addition, it provides the Bonanova School with installations and tools for teaching support. It also promotes research and participation in scientific forums, European exchanges of students and teachers and continuing education, and it has a job offers service. Its board of trustees includes students, teaching staff and representatives of IMAS, and of external healthcare companies.

■ REFORM OF THE NURSING EDUCATION PROJECT. Twenty-five years of experience of the University School of Nursing has meant the starting point for the renewal and integration of new systems of higher education. The new paradigms to which the Nursing School is committed change the educational focus towards the learning of the student and incorporate the notion of professional competence as the aim of its teaching.

In the year 2002, the teaching staff at the University School of Nursing launched a process of renovation and teaching innovation, with the aim of building up a "tailor-made" nursing curriculum. In this new project, students are the indisputable centre of the educational process, and it is necessary to facilitate their maximum possible development of all those skills that nursing practice brings into play.

■ WORK GROUP FOR A COMMON EDUCATIONAL PROJECT. In the year 2002, the IMAS started a study of the different teaching centres and resources at the institution's disposal, as well as of the relations maintained with different universities and

educational authorities. In-depth analysis was made of the best possible strategies with the aim of bringing together different teaching resources around a common educational project in health sciences, and to do this in the most efficient way. This work allows for the planning of optimum organisational models, future lines of teaching and those changes and improvements necessary to give maximum impetus to the teaching vocation of the professional staff.

## We are a reference point in the continuing education of the healthcare sector

*An entire series of courses and conferences have become a reference point for healthcare professionals, and their sphere of projection has grown far beyond that of the IMAS itself.*

■ COURSE IN ANTI-BIOTIC THERAPY. This is one of the institution's oldest and best known courses, held for the 31st time in the year 2002. Based initially on the centre's speciality during the 1960s, i.e. infectious diseases, today it can be considered one of the classic courses that any doctor practising in Catalonia should have taken in order to know about and work efficiently with antibiotic therapy.

■ CONFERENCE ON BREAST CANCER. This conference was a pioneer in its speciality and continues to be a scientific and media point of reference as regards the status of preventive work on breast cancer in our country. The conference was held for the eighth time in the year 2002.

■ COURSE ON THE MENOPAUSE. This course addresses gynaecologists, internal medicine specialists and primary healthcare doctors, and is one of the most respected courses in Spain on the subject. Every two years it reviews new scientific contributions to the sphere of the menopause.

■ COURSE ON ANAESTHESIA. The study of surgical risks when administering anaesthesia, sedation, pain therapy, blood transfusions, or saving blood have been some of the issues dealt with by this course, which is held every year with increasing impact.

■ COURSE ON REHABILITATION. A multi-disciplinary course, designed for all professionals who intervene in the rehabilitation of patients, in order to achieve the best quality of life after any acute condition. Based on the number of people attended, the Physical Medicine and Rehabilitation Service is a reference point in terms of rehabilitation treatment of conditions such as hemiplegia.

## Our team, the main capital asset of the IMAS

*Over half of our professionals attended training activities.*

■ **CONSOLIDATION OF THE WORKFORCE.** In compliance with the sector agreement, a total of 169 vacancies have been announced this year, prominently: 42 for doctors, 37 for nursing, 45 for nursing auxiliaries and 27 for administrative auxiliaries. The workforce of IMAS centres numbers 2,076 professionals.

■ **CURRENT SITUATION OF THE PROFESSIONAL CAREER.** Professional career paths (doctors, nursing and schools) are being implemented in accordance with the agreements and 595 professionals have been assessed. The incentives programme for groups of intermediate technicians, administrative auxiliaries and operators, amongst others, has begun.

■ **CONTINUING EDUCATION.** The training and recycling of professional staff working at the IMAS is a prime aspect, both for it to continue offering the best quality in healthcare and because it guarantees people's involvement and motivation and offers new possibilities for professional development. In 2002, a total of 72 training schemes were set up and 1,735 hours of teaching were given, with 1,167 professionals involved: over half of the institution's total staff.

The courses organised by the IMAS follow three strategic lines: organisational changes, such as the production of career paths and clinical nursing guides, or on the service and communication culture; training needs, such as induction or refresher courses, training in good practice, bioethics and new technologies applied to the healthcare world; and, playing an increasingly important role, the response to the emerging needs of citizens, such as intercultural courses, or conferences addressing the healthcare education of the families of patients with different health problems.

■ **KNOWLEDGE MANAGEMENT: THE YELLOW PAGES.** The IMAS Training and Human Resources departments launched an innovative project for the managing the knowledge of the organisation's workers.

The project involved the creation of a "yellow pages" where all those workers who so desired could voluntarily enter details on their experience and knowledge. Registers are generated in different

categories, from knowledge specific to each profession to transversal knowledge, such as languages, computers or bioethics; they also cover whether workers belong to any associations or their personal hobbies.

The yellow pages will make it possible to better locate knowledge, increasing contact between people and benefiting their efficacy, and it will also create new opportunities for cooperation and for communities of experts or of people with similar interests to be formed.

## Quality, a real commitment

*Quality is also an attitude that all our staff incorporate into their daily professional work and sensitivity towards improvement.*

■ **NEW QUALITY COMMITTEES: GENETICS AND PERINATAL PATHOLOGY.** In 2002, committees were set up for genetics and perinatal pathology, which have in common their response to new demands from users and families in relation to the information that new technologies and diagnosis tests place within our reach. In this respect, we want to guarantee that users and health professionals can have access to the resources and information necessary for taking the best decisions, whether in terms of reproductive processes relating to the health of mother and baby, in the Perinatal Pathology Committee, or in relation to the information and monitoring of patients and their families in the detection of illnesses of a hereditary type, in the Genetics Committee.

■ **ABUSE COMMITTEE.** The IMAS hospitals have created a specific technical committee for attention to cases of abuse, which has produced protocols and algorithms for action when attending to or detecting any type of abuse, whether related to gender, elderly people or children. The IMAS professionals accept the ethical and professional commitment of providing comprehensive attention to people who are possibly being abused by providing them access to healthcare, psychological and social help.

■ **ISO AT THE BONANOVA SCHOOL.** The Bonanova School is the first centre for training healthcare technicians that has set itself the goal of obtaining ISO 9001-2000 certification in 2003. For this, it has produced a manual on quality, procedures and strategic documents for the centre.

■ **EXCELLENCE IN WASTE MANAGEMENT.** Raising awareness regarding environmental issues has traditionally been emphasised at the IMAS, with excellent cooperation from staff in the selective separation of waste. In advance of the regulations, the different IMAS centres and especially the Hospital del Mar, started to incorporate recycling circuits over ten years ago. We currently boast one of the most advanced systems for the elimination of bacteria through the ionisation of water circuits, unique in our territory.

During the year 2002, new actions started included the substitution of mercury thermometers for digital systems, the separation of organic waste from the kitchens, and the separation of mineral oils from maintenance machinery.

## Hospitals open to participation of the general public

*The IMAS centres are characterised by their deep roots in the city and a relationship with the public that goes beyond that strictly demanded of healthcare.*

■ **USER SATISFACTION.** User satisfaction is one of the variables that we constantly measure to detect which aspects are more or less valued in the complex world of healthcare. In the year 2002, we saw excellent evaluation of the technical training of our nursing professionals, which scored 9 on a scale of 10, based on surveys of perceived quality amongst users of the Cardiology Service on the care they received.

■ **OPEN DAY AT THE HOSPITAL DEL MAR.** The Hospital del Mar will soon be celebrating its centenary, and in the year 2002 it held an open day in order to get closer still to its users. A very creative and participative programme was organised, with activities of all types, including a tai-chi class, games and shows for all the family and visits to the centre's least known corners. These were enjoyed by over 800 people. Bringing centres closer to the public is a way of increasing our presence in the districts, of being better connected to users and of being a close, accessible and human team.

■ **IMPACT IN THE MEDIA.** The activities of IMAS have been very much present in the media for their importance, and the number of reports in the media has risen by 78%. This new annual report, started in the year 2002, has also been proof of the interest in transparency before all types of interlocutors, to show our annual activity.

■ **A MORE COMFORTABLE STAY.** Comfort in the hospitalisation area has also been a focus of schemes for improvement, such as the possibility of choosing a menu for patients on normal diets and also special menus for hospitalised children.

■ **SMOKE-FREE HOSPITALS.** In 2002 we worked on a programme to guarantee smoke-free centres for users and professionals. We are enthusiastic about this programme, both in terms of our function in ensuring compliance with legal regulations and because it means promoting education and dialogue, which can achieve a clean environment and provide opportunities for people to give up smoking.

■ MEDICAL CARE

Cardiology	Hospital del Mar
Coronary Unit	Hospital del Mar
Haemodynamics	Hospital del Mar
Dermatology	Hospital del Mar
Gastroenterology	Hospital del Mar
Endocrinology	Hospital del Mar
Internal medicine	Hospital del Mar
Infectious medicine	Hospital del Mar
Nephrology	Hospital del Mar
Neurology	Hospital del Mar
Neurophysiology	Hospital del Mar
Neuro-psychology	Geriatric Centre
Chest medicine	Hospital del Mar
Rheumatology	Hospital de l'Esperança and Hospital del Mar

■ ONCOLOGICAL CARE

Haematology	Hospital del Mar
Oncology	Hospital del Mar
Breast cancer prevention	Hospital del Mar and Hospital de l'Esperança
Radiotherapy	Hospital de l'Esperança
Palliative Care Unit	Hospital de l'Esperança

■ CARE FOR THE CRITICALLY ILL

Anaesthesiology, reanimation and pain therapy	Hospital del Mar and Hospital de l'Esperança
Intensive medicine	Hospital del Mar

■ SURGICAL INTERVENTIONS

General surgery	Hospital del Mar and Hospital de l'Esperança
Maxillofacial	Hospital del Mar
Orthopaedic surgery and traumatology	Hospital del Mar and Hospital de l'Esperança
Vascular surgery	Hospital del Mar and Hospital de l'Esperança
Neurosurgery	Hospital del Mar
Ophthalmology	Hospital de l'Esperança and Hospital del Mar
Ear, Nose and Throat	Hospital del Mar
Urology	Hospital del Mar and Hospital de l'Esperança

■ MOTHER AND CHILD

Obstetrics and gynaecology	Hospital del Mar and Hospital de l'Esperança
Sexual and Reproductive Healthcare Service	Ciutat Vella i Sant Martí
Paediatrics	Hospital del Mar
Paediatric surgery	Hospital del Mar
Neonatal	Hospital del Mar

■ REHABILITATION

Physical Medicine and Rehabilitation	Hospital de l'Esperança
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■ PSYCHIATRY AND MENTAL HEALTH

Psychiatry	Hospital del Mar and Psychiatric Institute
Mental Health Centre	Hospital del Mar
Substance Abuse Unit	Hospital del Mar
Drug Addictions Care and Monitoring Centre	Hospital del Mar

■ EMERGENCIES

Emergencies	Hospital del Mar, Hospital de l'Esperança, Peracamps Centre, and Psychiatric Institute
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■ SOCIAL ASSISTANCE AND HEALTHCARE

Geriatrics	Geriatric Centre
Convalescence Unit	Geriatric Centre
Geriatric UFISS <sup>(1)</sup>	Hospital del Mar
PADES <sup>(1)</sup>	Geriatric Centre
Palliative Care Unit	Hospital de l'Esperança

■ SUPPORT SERVICES

Clinical analyses <sup>(2)</sup>	Hospital del Mar, Hospital de l'Esperança, Geriatric Centre and Psychiatric Institute
Pathological Anatomy	Hospital del Mar
Blood bank	Hospital del Mar and Hospital de l'Esperança
Pharmacy	Hospital del Mar, Hospital de l'Esperança, Geriatric Centre and Psychiatric Institute
Radiodiagnosis <sup>(3)</sup>	Hospital del Mar and Hospital de l'Esperança

(1) UFISS: Interdisciplinary social healthcare functional unit.

PADES: Programme of home care – support teams.

(2) This activity is carried out by the Laboratori de Referència de Catalunya, a company whose major shareholder is the IMAS.

(3) This activity of magnetic resonance imaging and nuclear medicine is carried out by CRC-Mar, a company in which the IMAS is a shareholder.