Table of Contents

3  Introduction
4  History
14  Strategy
22  Patients
30  Staff
38  Research and Lecture
46  Strategic Partners
49  Facts and Figures
54  Overview of the CharitéCenters
55  Organizational Structure
56  Publishing Information
Introduction

In the year 2010, Charité – Universitätsmedizin Berlin proudly celebrated its 300 year anniversary. Originally founded in 1710 as a home for those suffering from the plague, Charité developed into a renowned and Europe’s largest academic medical centre. The festivities culminated in a series of events during one week in October, which were celebrated with other Berlin scientific institutions.

The economic consolidation of Charité has further improved in 2010. This is owed in large part to the tireless engagement of its approximately 13,000 employees. As in the year before, Charité managed to exceed its budget target through structural changes and sustainable improvements in cost structure. Third-party funding was increased in 2010 to a record € 149 million, which secured the employment of 2,000 additional women and men. At the same time, Charité set the pace by the successful introduction of a model study course in medicine.

In 2010, the Berlin House of Representatives made the fundamental decision to release investment funds for the renovation of the hospital’s high rise building in Berlin-Mitte. Construction planning for 2013 through 2015 has since run at full throttle. This furthers the much needed renewal of Charité’s infrastructure.

For the upcoming fiscal year of 2011, Charité has set the goal of a balanced budget. In 2010 we have cleared the way and we are convinced that we can meet this ambitious goal if we all work together.
300 Years of Charité
In the year 2010, several important scientific institutions in the capital celebrated their foundation: the Berlin State Library was 350 years old, the Berlin-Brandenburg Academy of Sciences and the Charité could each look back on 300 years, and the Humboldt University was able to look back on 200 years of learning. The 100th anniversary of the Max Planck Society was also celebrated, even though, according to the calendar, it was not due until 2011. On account of all these anniversaries, the City of Berlin decided to pay tribute to all these venerable institutions by declaring a whole year of science. The jubilee presented a comprehensive program and pursued above all one main goal: in particular, to sensitize the people of Berlin to take an interest in science by awakening their curiosity and thereby opening the doors to develop common scientific cooperative projects in the future.

The 300-year history of the Charité is marked by traditions and breakdowns, false starts and new awakenings. The moving chronicle of the University Medical Center is connected inseparably with the history of Berlin and the progress of research, science and, above all, medicine, which have changed the world. In the year 2010, several important scientific institutions in the capital celebrated their foundation: the Berlin State Library was 350 years old, the Berlin-Brandenburg Academy of Sciences and the Charité could each look back on 300 years, and the Humboldt University was able to look back on 200 years of learning. The 100th anniversary of the Max Planck Society was also celebrated, even though, according to the calendar, it was not due until 2011. On account of all these anniversaries, the City of Berlin decided to pay tribute to all these venerable institutions by declaring a whole year of science. The jubilee presented a comprehensive program and pursued above all one main goal: in particular, to sensitize the people of Berlin to take an interest in science by awakening their curiosity and thereby opening the doors to develop common scientific cooperative projects in the future.

From Plague House to the Largest University Hospital in Europe

When the Charité was founded, the French Revolution lay in the distant future. Still there were people who had lived through the Thirty Years War and Prussia trembled before the plague. Since the late Middle Ages, this highly contagious infectious disease had raged again and again throughout Europe, causing thousands of deaths. At the beginning of the 18th century, the „Black Death“ was once again focused in the direction of Berlin. However, the Prussian Royal City responded quickly and as a precaution decided to build a Plague House outside the city, which was completed a year later in 1709. The feared disaster never came; Berlin was spared from the plague. As a result, the house was converted to use as a house for the poor and as a garrison hospital to care for wounded and sick soldiers. In 1726, it was decided to convert the building into a public hospital. Finally, a year later, the building was given its name, the Prussian King Frederick William I decreed: „... it shall be called the House of Charity“ (Charité), derived from the French. He hardly suspected that he had thus laid the foundation stone for the largest university hospital in Europe. Quite early, the opportunity to train military surgeons in the newly founded hospital was recognized. The academization of the training did not begin until the founding of the Berlin Humboldt University in 1810. From this point on, research was introduced into the Charité. The years between 1840 and 1920 are today considered to be the first zenith of the University Medical Center. Many well-known scientists have contributed to the development of the Charité and the history of modern medicine. Included among the prominent personalities, who today are inextricably linked with the name Charité, are the physician and social politician Rudolf Virchow, as well as the Nobel Laureates: Paul Ehrlich, Robert Koch and Emil von Behring. Eight of the German Nobel Prize winners for medicine and physiology were associated with the Charité.

The Charité has survived two world wars, in the Nazi era its structures were dismantled and it was a place of persecution and expulsion. The Charité’s direct location along the Berlin Wall on the territory of the GDR, together with its role as a prestige object of this socialist state, made it the neuralgic point of inter-German relations during the division of Berlin. After 40 years of socialist dictatorship, the German reunification brought new momentum to the Charité: in 1993 the Rudolf-Virchow Hospital in Wedding and the Campus in Mitte
were integrated as the Medical Faculty of the Humboldt-University. In 2003, the medical faculties of the Humboldt University and the Free University, including all connected medical centers in Mitte, Steglitz, Wedding and Berlin-Buch fused to become today’s Charité-Universitätsmedizin Berlin. So today, there is only one combined university medical center in Berlin with three inpatient houses: Charité Campus Mitte, Charité Campus Virchow in Wedding and Charité Campus Benjamin Franklin in Steglitz. (Berlin-Buch, is a purely science and research location).

300 years of Charité - a worthy occasion to look at the moving chronicle of an institution, which has developed from a plague house into the largest University Hospital in Europe. In the years 2009 and 2010, numerous events were organized by the Charité, which highlighted many aspects of the turbulent history of the house and for the first time, gave some points a historical context. The attractively designed program, with over a hundred events, was as varied as the history of the hospital itself, ranging from exhibitions and a lecture series of conferences and panel discussions, as well as several ceremonies and parties.

Good Things take Time
In the middle of the year 2007, committees and working groups were founded in order to master the challenges of the upcoming festival year. The project manager, Reiner Felsberg, who began working for the Charité in 1980, was able to motivate the Board of Directors and the management staff of the Charité, the historians of the Museum of Medical History and the Institute for the History of Medicine, retired researchers, the employees’ Equal Opportunity representative, the corporate communications division and „old companions“ from reunification times, who also with passion and pride, wanted to make the anniversary a success. All could and should bring in their proposals. Felsberg brought together the threads of ideas and developed with his group Charité300, peu à peu, a comprehensive versatile program that celebrated the 300-year history of the Charité, not only in an appropriate and festive manner, but also continued to document the history of the Charité, today.

Ring Lecture series „300 Years of Charité - the Evolution of Medicine“
From May 2009 to October 2010, under the scientific direction of Professor Karl Max Einhäupl, the Chairman of the Charité, renowned researchers and scientists, students, and an interested Berlin public participated eleven times in the 300-year Charité – Ring lecture series - „300 years of Charité - the evolution of medicine“. The agenda was focused on the scientific priorities of the University Medical Center. Together they reflected not only on life sciences and their social significance, but also on the associated controversies. In June 2009, for example, the topic of „Biological determinism - the new image of human medicine“ was on the program. In talks and lively discussions with the audience, Professor John Dylan Haynes, Director of the Interdisciplinary Center for Modern Imaging (ICMB) at the Charité, the Mainz philosopher, Professor Thomas Metzinger, the Hamburg-based legal expert, Professor Reinhard Merkel and Professor Thomas Meyer-Lindenberg, Director of the Central Institute of Mental Health in Mannheim, introduced the question, as to whether a “free will” really exists or whether all decisions are pre-determined genetically. Ardently debated was the question of whether criminals should be punished for their actions, or rather whether more understanding should be shown, as it is certain that some people have a crime prone genetic disposition. On another evening one could accompany neuro scientists in the search for the soul or throw a glance into the future of our aging society.

The series was received splendidly by the Berlin audience; an average of 100 participants per lecture showed the great interest of the public, to become familiar with the fields of research at the Charité, and to go on a journey through the evolution of medicine.
Host to the World at Charité
Under the same name as the Ring lecture series, „The Evolution of Medicine“ on 14th October 2009, the first World Health Summit at the Charité, under the patronage of the German Federal Chancellor, Angela Merkel, and the French President, Nicolas Sarkozy, opened its doors. At the opening ceremony, high-profile speakers, including the Federal Minister for Education and Research, Professor Annette Schavan, the Governing Mayor of Berlin, Klaus Wowereit, and Ethiopia’s Health Minister, Tedros Adhanom Ghebreyesus, participated in the conference. A highlight of the evening was the spectacular live link-up to the space station ISS, which demonstrated the contribution of the „Fifth Campus“ of the Charité - medical space research. During the five following days, 700 international experts from science, politics, civil society and business transformed the Langenbeck-Virchow-Haus at the Charité into a place of exchange and discussion. In talks, panel discussions and working groups the experts discussed what could be done to promote sustainable improvement of global health standards.

A very ambitious goal which Professor Detlev Ganten, President of the World Health Summit, was very aware of: „The First Summit is only the prelude to the beginning of long-term cooperation of all global players,“ Professor Ganten confidently stated. To put this idea into action, on the occasion of the First World Health Summit, the Charité founded the M8 Alliance of Academic Health Centers and Medical Universities. This alliance is a medical and scientific Forum of Excellence, which deals with scientific, political and economic issues in the fields of medicine and health care. The members, including the Sorbonne in Paris, the Johns Hopkins University in Baltimore (USA), Peking Union Medical College and the University of Sao Paulo, are the founding members of the academic World Health Summit and have successfully continued their efforts by organizing the second summit in 2010. Meanwhile, numerous high-profile speakers have already promised their participation in the World Health Summit 2011.

Charité: The Heart of a Social City
In its anniversary year, the Charité honored two Berlin personalities with honorary doctorates: Dr. Jenny de la Torre Castro received the award for her efforts in the health care of the homeless in Berlin. For more than 15 years, Dr. de la Torre Castro has dedicated herself to an unprecedented commitment of medical and humanitarian aid for destitute people. „The Charité is the social heart of the city.„ „Therefore we are particularly proud that Dr. de la Torre Castro completed her residency training at the Charité and since then through her work in Berlin, she has become an example for generations of students,“ said the Dean of the Charité, Professor Annette Grüters-Kieslich, during the academic ceremony held in the Concert House at the Gendarmenmarkt.

The second honorary doctorate was awarded to Professor Manfred Erhardt. From 1991 to 1996, as the senator for science and research, he newly reshaped the Berlin science and research landscape. „We owe it to him, that once again today, the Charité is an institution of international reputation,“ remarked the Dean. Renate Künast, Chairman of the parliamentary group Bündnis 90 / Die Grünen and in 2011 a leading candidate for the office of the Governing Mayor of Berlin, delivered the laudatory speech for the two honorary doctors and for around 100 young medical doctors, who as part of the ceremonies received their PhD degree certificates. The politician, quoted as a great physician and “March” revolutionary Rudolf Virchow, who wrote in 1848: „The medicine is a social science and politics are nothing more than medicine on a large scale.“ Künast stressed that, in this jubilee year, the Charité would do justice to the philosophy of this renowned scholar.

*Imperial College, London, Johns Hopkins University, Baltimore, USA, Kyoto University Graduate School of Medicine, Japan, Monash University of Melbourne, Australia, NUS Yong Loo Lin School of Medicine, Singapore, Peking Union Medical College and Hospital and Chinese Academy of Medical Sciences, China, Russian Academy of Medical Sciences, Moscow, Russian Federation, Sorbonne Paris Cité, France, University of Sao Paulo, Brazil, InterAcademy Medical Panel (IAMP), International Association of Academic Health Centers (AAHC)
The Next Generation: School Project „Time travel Charité“

In cooperation with the Senator for Education and Science, Professor Jürgen Zöllner, the Charité called to life a student competition: „Time travel Charité“. Ingrid Reisinger, an emeritus professor of nuclear medicine had developed the concept based on an idea of the medical historian, Professor Volker Hess. The aim was to motivate the interest of young people in the diverse and eventful history of the University Hospital. In 2009/2010, students at school in their final year courses, were able to choose a theme from a list of topics for their seminar course work in political science, biology, physics, geography or history. As a special incentive, the work was recognized as a fifth component to their high school examinations. The context of all the works dealt with the development of individual institutions and disciplines. The focus here was on prominent and influential personalities and the historical buildings of the hospital. The students received the support of active scientists and researchers from the Charité.

At the Langenbeck-Virchow-Haus, Nobel Prize Laureates and other famous personalities at the World Health Summit were still debating, when during the evening of the last conference day, the senior high school students were awarded prizes for their best work. The Chairman of the Board of the Charité, Professor Karl Max Einhäupl, said he had been deeply impressed by the work of the students. In the presence of parents and teachers, as well as numerous guests, Professor Reisinger presented the awards to the young students for their first scientific expertise. In her speech, she praised in particular the thoroughness of the research and the successful scientific presentations. One of the best presentations was given by Isabelle Glad for her investigations on “Deadly Eggs? The Salmonella Problem”. Professor Einhäupl was confident in the face of the young people, who had committed themselves and made the remark: „For the future of science, we have nothing to worry about."

All entries were published in a booklet, which now offers an exciting insight into the history and development of research at the Charité – out of the perspective of the next generation of scientists.

Historical Experience

The Charité is not only the largest and oldest university hospital in Germany, but it also has the most significant medical history museum. At the end of the 19th century, Rudolf Virchow invited the Berlin population to visit the Charité, even on Sundays, to see his exhibits of unusual cases of illness, deaths, births, new medical achievements or pioneering research knowledge. On the occasion of the anniversary, the Museum opened its doors. Professor Thomas Schnalke, Director of the Museum, curated together with the historian, Isabel Atzl, the exhibition: „Charité. 300 Years of Medicine in Berlin.“ The exhibit showed the hospital embedded in the development of Berlin as a city and medical cosmos. By the use of unusual exhibits, photographs and information panels, it could be shown how the university hospital had responded to the great medical challenges of history. Personalities, who had significantly determined the medicine of their time at the Charité and in Berlin, came to speak at the Charité, without closing their eyes to their failures and transgressions.

The staff of the Charité was the focus of a further exhibition. Under the direction of Henning Cammann, the management staff, under the motto: “Know the past, to understand the present and the future,” designed a spectacular show that displayed the influence of the social and political environment on the living and working conditions of the Charité staff during the Cold War. Central themes were discussed, including the military and ideological penetration of everyday working life, as well as the development of employee representation. The exhibition called to mind long suppressed details, such as the fact that students had to study Marx, Engels and Lenin during the first „red“ week of the semester. The boundary of the Charité property was also the physical border of the GDR and so it was inundated with political tirades for many years. „History begins when the last witness is dead,” was the witticism of a well-known historian – “… and they cannot even begin, if the knowledge of the witnesses is not used.” For years, remaining true to this motto, historians at the Charité have collected material on the Charité and its existence in the
as well as interviewing numerous veteran employees. The result was presented in Berlin on 1st September 2010, with the exhibition: “The Charité between the East and West (1945 - 1992). Contemporary witnesses remember” at the Berlin House of Representatives. As a focal point, the displays showed - in individual interviews and anonymous collages - the working environment of the largest hospital in the GDR. Through its exposed position, the medical center was a particularly suitable institution to illustrate the interaction of the different political levels in the GDR. Highly consciously, the exhibition did not limit itself to famous doctors and researchers, but also gave employees, from the areas of nursing, technology and management, a chance to speak. The hardships of the migration of a „Republic of Fugitives“ were just as obvious as the health care deficiencies. However, they maintained the special cohesion of the workforce, the pride of working at the Charité, the pride in hospital festivities and their identification with the “Lighthouse of East German medicine”.

**The Clinic in the Shadow of the Wall**
More than any other institution in the GDR, the Stasi (State Security Service) kept the Charité under constant intense observation. In research, teaching and health care, staff and patients were intensively monitored; many workers were subjected to repression. The health care situation in the medical center was marked by the lack of an effective economy in the SED-governed state. By means of the eyewitness exhibit, the Universitätsmedizin Berlin presented its own history; a good 20 years after the fall of the wall - and with it, closed an important gap in the processing of GDR history. The curators, Dr. Rainer Herrn and Laura Hottenrott, from the Institute of the History of Medicine, summarized the GDR history of the Charité into seven themes. They soon realized that the opinions at the Charité on the communist era were at opposite ends of the spectrum. With a total of 30 former and current employees of the Charité, interviews were conducted with nursing and administrative staff, doctors and former students. The exhibition aim of the curators was to present different perspectives and to make the lives of the witnesses in the context of contemporary history more understandable. „Experience and memory is diverse and often contradictory in itself,“ was written by Dr. Rainer Herrn and Ms. Laura Hottenrott in the accompanying exhibition publication. Memory and justification are mixed; the self-image and the biography of the individual play a central role in the review of daily life and working life in the GDR.

The memories on the “original soundtrack” were the centerpiece of the exhibition. This was supplemented with a look into the recent history of the Charité by means of photographs and comprehensive information, which, in this form, was made available to the general public for the first time. To achieve this, a close cooperation together with the Federal Foundation for the Study of the SED-dictatorship and with the Federal Agency for Stasi Documents (BStU) was necessary. Marianne Birthler, then head of the BStU, supported the project: the Charité Ministry for State Security (Stasi) files are one of the largest holdings of the Authority; for the exhibition on the occasion of the 300-year celebration, tens of thousands of pages were reviewed. The Federal Foundation for the Study of the SED-dictatorship promoted the project with € 40,000.

**A Birthday Celebration for all: Tour de Charité and Employees’ Party**
Over 650 cyclists, swung themselves onto their bikes in early September 2010 and started the Tour de Charité. Also present were employees from all areas of the hospital and the Charité-subsidiary, CFM, as well as their families and numerous students from the university hospitals. „The rally was the great idea of our intensive care nurse Victoria Schirazi-Rad and a major logistical challenge. We wanted to ensure that as many as possible could attend and in particular that eve-
Everyone arrived safely, but also that the cyclists from the three Campuses arrived at relatively the same time, recalls Reiner Felsberg. The fear was unfounded. The professionals of the ADFC (German Bicycle Club e.V.) helped the organizers of the Charité in the planning and implementation of the tour. From the university locations in Buch, Wedding and Steglitz, groups cycled to Campus Mitte. Professor Einhäupl slipped into the White Jersey of the tour and joined the cyclists from the Campus Virchow-Klinikum. Matthias Scheller, Director of the Clinic, accompanied the team on the route from the Campus Benjamin Franklin and Professor Detlev Ganten, Chairman of the Foundation, Charité, led the team from Berlin-Buch (21 kilometre route) to their destination.

“Early in the afternoon, the groups began to arrive at the Campus Mitte, where a celebration party had been prepared for everyone,” reports Cornelia Czerwonka, who supervised the event service within the Corporate Communications Department of the Charité and who, with the help of Reiner Felsberg, had organized the festival. Together with nearly 1,000 guests, Prof. Einhäupl and the Managing Director of CFM, Toralf Giebe, opened the „birthday surprise tent“. Therein a giant raspberry cake was waiting, with a large chocolate Charité logo - the celebration present from the Charité to its employees.

The subsequent stage show was impressive. „For example, we had a Korean dance group, which presented an impressive professional fan dance, dressed in colorful costumes, as well as a Latin-American folk music duo and a performance by the dance Group Latinodance,“ reports Cornelia Czerwonka. One special feature: all of the acts involved employees, who showed what hidden talents lay beneath the surface. Also for the children of the Charité employees, the celebration mood was guaranteed: Author Oskar Ansull read stories to the children and they could play basketball, as well as playing can throwing games to keep them occupied. In addition, the youngsters enjoyed themselves with sack and egg races, painting and craft activities. The celebration on the lawn in front of the Anatomy Department lasted until early evening.

**Freedom and Responsibility of Science**

As a highlight of the 300th anniversary, in October 2010, the Charité-Universitätsmedizin Berlin jointly instigated a week-long festival with the Humboldt University of Berlin and the Berlin-Brandenburg Academy of Sciences. Under the motto: „Freedom and Responsibility of Science,“ where researchers, doctors, members of other health professions and medical students came together for nine days in Berlin. Current questions in science, but also philosophical, economical and geopolitical aspects of the human right to health were on the agenda. The Berlin audience experienced a week filled with exciting events on interesting subjects and the chance to carefully study the largest University Hospital in Europe.

**The Day of Science**

The jubilee festival week began with an opening ceremony in the Concert House at the Gendarmenmarkt in the presence of several German politicians - led by the Federal President, Christian Wulff - and an evening concert at the Berlin Philharmonic. On 8th October, the Society of German Natural Scientists and the Physicians Association (GDNÄ) held a one-day conference under the title “Feel - Think - React: Does neuroscience dominate our image of man?” At the event, speakers discussed the latest findings in brain research and the societal implications. Here, as in the Ring lecture series, the issues revolved around the question of the existence of free will. In addition, the need for a special „neuro right“ and ethical borders in the context of new technological developments were discussed. Professor Gabriel Curio, Senior Staff Physician at the Department of Neurology and Clinical Neurophysiology at the Charité, presented the findings of the Berlin research group into the interlinking of the brain streams with computer programs for patients with severe motoric disturbances. As this technology will be examined not only medically, but also militarily, the participants in the conference discussed not only the opportunities, but also the dangers of these so-called “brain computer interfaces”.
Open House Day and the Day of Health
On 9th October, the Charité Campuses Mitte, Virchow-Klinikum and Benjamin Franklin, opened their doors and gave an open invitation to the citizens of Berlin to explore the various medical departments during the “Open Door Day”. With many guided tours, doctors and nurses at all sites allowed a look behind the scenes into the organization of the hospital.

On the same day, the congress of the Berlin Medical Centers and the Berlin Hospital Society: “For the health - 300 years of hospital care in Berlin” was also open for all interested parties.

For the first time, this event brought together, on one platform, all prominent health experts in the capital city. The top speakers spanned an impressive historical arc from the founding of the first hospitals, over patient care during both world wars and medical care in the divided city, up to the present day. The review made clear to the participants, how much the Charité is a part of the social organism of the city, as the oldest hospital in Berlin and how the hospital has grown and is still continuing to grow.

Berlin meets Singapore: Day of Economics
Singapore has very quickly become the epitome of science-oriented development of a society and economy. The Southeast Asian city-state has made health the focus of all strategic decisions and investments. Excellence and innovation characterize Berlin as a location for medicine and health science - not the least, because of the excellent reputation of the Charité.

On the day of economy, experts from business, science and politics met in a panel discussion sponsored by the Berlin Economic Discussions e.V. and called for talks with experts from Singapore to look beyond the borders of Germany and Europe. Under the title: „Berlin meets Singapore - health as a leitmotif of a knowledge-based society,” they exchanged experiences and strategies and synergies were explored. The panelists included the Governing Mayor of Berlin, Klaus Wowereit, the State Secretary of the Singapore Health Ministry, Yong Ying-I, the Ambassador of the Republic of Singapore, Jacky Foo, as well as representatives from industry and science from the two countries. Professor Ganten and Professor Einhäupl provided the perspective and expertise of the Charité.

Day of Nursing
The future of the nursing profession in Germany is one of the most pressing health issues of today. On the Campuses of the Charité, more than 4,000 nurses are employed. To better understand their professional life, the Charité devoted a day of festivities for all nurses, who with their professionalism and motivation provide for the welfare of the patients.

In the ruins of the auditorium of the Medical Historical Museum, the history of nursing on an international and national level, as well as at the Charité, was demonstrated. On the initiative of the Director of Nursing, the history of the nursing profession at the Charité had been gathered together in advance for this event. The result was an impressive poster exhibition with photos from the past and the present. Following the Jubilee Year, it could be seen as a touring exhibition to be shown at all sites of the University Hospital. In conversations with contemporary witnesses, education, advanced training and continuing education, as well as courses of studies and areas of practice were discussed. Current developments show how much nursing care has met the spirit of the times: the former Health Minister, Philipp Rösler, has proclaimed the year 2011 as the „Year of Nursing”. From 24th May 2011 to 8th January 2012 the Berlin Medical Historical Museum of the Charité is presenting a special exhibition: „Who Cares? The history and everyday life of nursing.”
Day of the Students
Since 1989, the European Student Conference (ESC) has been firmly established at the Charité. The ESC is Europe’s principal conference for young researchers, as well as medical students and alumni. Originally designed to enhance the scientific exchange between East and West Berlin; today above all, the networking and promotion of young scientists from the fields of medicine and biomedicine on an international level, is in focus.

The 21st meeting of the conference dealt with the topic: „The dimensions of cancer - from micro to macro,“ and took place not only within the framework of the Charité Anniversary Festival, but was also directly integrated into the program of the World Health Summit. In this way, the participants of the ESC had the opportunity to exchange ideas and to establish contacts with national and international experts, already established in their fields.

Charité as a Theater Event
Children having birthdays always receive presents, and the more “round-numbered” the birthday, the more the cooperation partners are prepared to give. The German Research Foundation, the Helmholtz Association and the Berlin-Brandenburg Academy of Science were among the supporters of a project on 22nd September 2010, allowing one of the most important and most consequential social medical innovations of the 20th Century to be brought onto the stage – “The Pill”. Its originator, Carl Djerassi, after receiving numerous scientific awards, turned his interest towards the theater. „Taboos,“ his sixth play, focuses on sexual behavior in the age of technical reproducibility and the impending separation of sexuality and reproduction. Professor Djerassi himself was present at the premier and afterwards discussed the piece with the Berlin women’s politician and ex-Charité employee, Mechthild Rawert (SPD). Karin Eveslage from the Division of Strategic Business Development, who in recent years has also brought to life a sensational cooperation with the Maxim Gorki Theater, coordinated the event. In the so-called lectures: „Cosmos and Man,“ professors of the Charité, discussed with the Berlin population on four to six Sundays in the year, the social and philosophical issues associated with their research.

On the official 300th Anniversary of the Charité, the theater producers took the occasion to hold a reading at the University Medical Center, thereby concluding the festival on 15th October 2010. Using original quotes and citations, the Gorki ensemble let key moments of Charité history be relived. These included the social question, which ultimately led to the founding of the Charité. The question presented by the plague in 1710 was: “How should one ensure the health care of the poor in extreme social distress?” On a historical level, the focus here was on the charitable motivation and also the tension between social engagement and the decisions made by the State of Prussia. Who were the needy at that time and how did society handle subjects, such as illness, age and social poverty at the beginning of the 18th century? This issue has succeeded in breaching the gap up to the present day. Today, the question of affordability of social and medical services is significantly determined by political debates. It touches the very foundations of social arrangements and the democratic consensus. The second critical points were the years around 1800. Ridiculed by contemporaries, such as a „philosophical theolog“ or „theological philosopher,“ Friedrich Daniel Ernst Schleiermacher was the pastor at the Charité, who at the same time shared an apartment as part of a flat-sharing community with Friedrich Schlegel. During this period not only Schleiermacher’s „On Religion: speeches to its cultured cynics“ but also the Athenaeum, a journal of which Schlegel, Schleiermacher and Novalis were in charge. The Charité evoked a spiritual awakening, which indirectly strongly influenced the German and European intellectual landscape. In Prussia, a fundamental change in the ideas of the individual, his function and responsibility were brought about by this enlightenment.
At the turn of the century, the final stage occurred almost simultaneously in Berlin at the Charité, which was influenced by the physician and social politician, Rudolf Virchow, and the Nobel Laureate Robert Koch, two of the greatest scientists of their time. They benefited from the research and belief in progress in the Western world, which could not be stopped by the path of industrialization. The tension between this belief and the sharpening of the social situation was rightfully the essence of the lecture series, because this is also the theme of Berlin.
Strategy
Charité has produced many prominent physicians and health professionals in its 300-year history. One of the most prominent was Rudolf Virchow, the founder of modern pathology. In 1848, as a young doctor he was dispatched to Silesia, where he was commissioned by the Prussian government to investigate the causes of a catastrophic typhoid epidemic, which had already caused many deaths. In his report, the physician went far beyond the medical advice that was expected of him, and called for an improvement in the living conditions of the workers, because, according to Virchow, „…Medicine is a social science, and politics are nothing more than medicine on a large scale.“

In the era of global networking, health needs must also be addressed globally. And this is where the World Health Summit, held in October 2010 for the second time at Charité - an event whose goals and aspirations would certainly have met the agreement of Rudolf Virchow. So it is not surprising that Professor Detlev Ganten, founder and president of the World Health Summit, reminds us of the great physician, in connection with the motivation of the World Health Summit: „Since the time of Virchow, Charité is considered to be one of the major institutions, worldwide, for its contribution to a significant advancement in modern medicine. 300 years after the founding of Charité, in this anniversary year, we are striving to build up this tradition and to stress our collective responsibility for the health and future of the world population. “

A Brilliant Opener
„Evolution of medicine“ - this was the motto of the first Summit in the autumn of 2009, when over 700 international experts from science, politics, business and civil society discussed the most pressing challenges of global health. A motto that suited Professor. Ganten for the Jubilee Year, whereby, Charité has contributed an important impetus to the worldwide development of medicine: The continuous research, diagnostic and treatment options, which have been rapidly developed during the past centuries, make accessible today, what would have been inconceivable in earlier times. The summit not only proceeded in accordance with the theme of the 2009 event, but also in the direction of a new medical approach: „evolutionary medicine“. The American physician, Randolph Nesse, explained to an international audience the relationship between the Darwinian theory of evolution and the present-day concept of health and disease, and hence our health systems. „The World Health Summit provides a forum for leaders with innovative ideas in the health sector to exchange ideas and opinions. It is vital, on this occasion that not only researchers, graduates and clinicians meet, but by the integration of political policy makers, economic leaders, industry and the media a basis for partnerships and political engagement is created, “ says Professor Steve Wesselingh, Dean of the Faculty of Medicine, Monash University of Melbourne; who will be co-president of the 2011 Summit.

Discuss with Each Other and Act Together
After a successful start, the dialogue was successfully continued in 2010. The themes „Translation, Transition, Transformation,“ are the focus of current health policy debates: climate change, urbanization and demographic change and are among the factors that are changing the world quickly and decisively (Transition). To keep up with the resulting health challenges, medicine must be reconsidered (Transformation), which means implementing new results and findings from research for diagnosis, therapy and prevention (Translation). The focus of the forums, panel discussions and lectures was based on the Millennium Development Goals 4 and 5 (reducing child mortality and improving maternal health), chronic diseases in underdeveloped countries, and health consequences of climate change, infectious diseases and the development and financing of health systems. The high number of participants shows that the selection of topics was of major current interest: 1,200 experts from 80 countries traveled to participate in the Conference. They transformed the Langenbeck-Virchow-Haus at the summit site center into a place of interdisciplinary dialogue for four days. Among the prominent speakers, including the French Nobel Prize winner, Francoise Barre-Sinoussi, were the director of the National Institutes of Health, Dr. Francis Collins, the health ministers of South Africa, Mali, Rwanda and Serbia, as well as senior representatives of multinational companies in the health sector: The World Health Organization, the European Commission, UNICEF and internationally renowned universities worldwide. For students and employees of Charité, the Summit is a tremendous enrichment, finds Dean Professor Annette Grüters-Kieslich: „The World Health Summit offers all of us the opportunity to experience excellent speakers who look beyond the confines of their own work.“ At the same time, the closing session of the Summit was the inaugural meeting of the twenty-first European Students Conference.

German-French Friendship, International Alliance
Professor Ganten sees the progress in comparison to the first conference above all in the intensified cooperation of the MB alliance, which was launched within the scope of the World Health Summit in 2009.

World Health Summit: Rethinking of Medicine

Charité has produced many prominent physicians and health professionals in its 300-year history. One of the most prominent was Rudolf Virchow, the founder of modern pathology. In 1848, as a young doctor he was dispatched to Silesia, where he was commissioned by the Prussian government to investigate the causes of a catastrophic typhoid epidemic, which had already caused many deaths. In his report, the physician went far beyond the medical advice that was expected of him, and called for an improvement in the living conditions of the workers, because, according to Virchow, „…Medicine is a social science, and politics are nothing more than medicine on a large scale.“

In the era of global networking, health needs must also be addressed globally. And this is where the World Health Summit, held in October 2010 for the second time at Charité - an event whose goals and aspirations would certainly have met the agreement of Rudolf Virchow. So it is not surprising that Professor Detlev Ganten, founder and president of the World Health Summit, reminds us of the great physician, in connection with the motivation of the World Health Summit: „Since the time of Virchow, Charité is considered to be one of the major institutions, worldwide, for its contribution to a significant advancement in modern medicine. 300 years after the founding of Charité, in this anniversary year, we are striving to build up this tradition and to stress our collective responsibility for the health and future of the world population. “

A Brilliant Opener
„Evolution of medicine“ - this was the motto of the first Summit in the autumn of 2009, when over 700 international experts from science, politics, business and civil society discussed the most pressing challenges of global health. A motto that suited Professor. Ganten for the Jubilee Year, whereby, Charité has contributed an important impetus to the worldwide development of medicine: The continuous research, diagnostic and treatment options, which have been rapidly developed during the past centuries, make accessible today, what would have been inconceivable in earlier times. The summit not only proceeded in accordance with the theme of the 2009 event, but also in the direction of a new medical approach: „evolutionary medicine“. The American physician, Randolph Nesse, explained to an international audience the relationship between the Darwinian theory of evolution and the present-day concept of health and disease, and hence our health systems. „The World Health Summit provides a forum for leaders with innovative ideas in the health sector to exchange ideas and opinions. It is vital, on this occasion that not only researchers, graduates and clinicians meet, but by the integration of political policy makers, economic leaders, industry and the media a basis for partnerships and political engagement is created, “ says Professor Steve Wesselingh, Dean of the Faculty of Medicine, Monash University of Melbourne; who will be co-president of the 2011 Summit.

Discuss with Each Other and Act Together
After a successful start, the dialogue was successfully continued in 2010. The themes „Translation, Transition, Transformation,“ are the focus of current health policy debates: climate change, urbanization and demographic change and are among the factors that are changing the world quickly and decisively (Transition). To keep up with the resulting health challenges, medicine must be reconsidered (Transformation), which means implementing new results and findings from research for diagnosis, therapy and prevention (Translation). The focus of the forums, panel discussions and lectures was based on the Millennium Development Goals 4 and 5 (reducing child mortality and improving maternal health), chronic diseases in underdeveloped countries, and health consequences of climate change, infectious diseases and the development and financing of health systems. The high number of participants shows that the selection of topics was of major current interest: 1,200 experts from 80 countries traveled to participate in the Conference. They transformed the Langenbeck-Virchow-Haus at the summit site center into a place of interdisciplinary dialogue for four days. Among the prominent speakers, including the French Nobel Prize winner, Francoise Barre-Sinoussi, were the director of the National Institutes of Health, Dr. Francis Collins, the health ministers of South Africa, Mali, Rwanda and Serbia, as well as senior representatives of multinational companies in the health sector: The World Health Organization, the European Commission, UNICEF and internationally renowned universities worldwide. For students and employees of Charité, the Summit is a tremendous enrichment, finds Dean Professor Annette Grüters-Kieslich: „The World Health Summit offers all of us the opportunity to experience excellent speakers who look beyond the confines of their own work.“ At the same time, the closing session of the Summit was the inaugural meeting of the twenty-first European Students Conference.

German-French Friendship, International Alliance
Professor Ganten sees the progress in comparison to the first conference above all in the intensified cooperation of the MB alliance, which was launched within the scope of the World Health Summit in 2009.
In the international M8 Alliance renowned medical faculties, academies and health centers come together to confront the scientific, political and economic questions of medicine and healthcare. „The quality of the program could be increased even further in 2010 by the expertise of our M8 partners,” said Priv.-Doz. Dr. Mazda Adli, Executive Director of the World Health Organization. Similarly to the G8 group, which was founded in 1975 on the initiative of the German Federal Chancellor Schmidt and the former French President Valéry Giscard d’Estaing, the M8 alliance is also the result of the German-French friendship and cooperation: Charité has long maintained a close connection with Parisian university medicine, in particular with the Paris Descartes University. „Together we launched the network of excellence and initiated the first World Health Summit, which is under the patronage of the French President, Nicolas Sarkozy, and the German Chancellor, Angela Merkel, since its inception,” Dr. Adli recalls. Also Professor Karl Max Einhäupl, Chairman of the Board of Charité, explains the origins: “The starting point for the foundation was the knowledge of the need to discuss the politics concerning the care of the world population with modern medicine.”

Up to now, six other prominent institutions from Australia, England, the United States, China, Japan and Russia have accepted an invitation to participate in the M8 alliance. Furthermore, also participating are 69 institutions of the Inter-Academy Medical Panel (IAM), the combined national academies of science, including the German Leopoldina, and more than 100 health centers affiliated to the AAHC (Association of Academic Health Centers). The Summit President pointed out that they are of course open for new admissions. Universities from Singapore and Sao Paolo have already taken part in the program meeting of the members for the summit in 2011, with institutes in India and Africa under discussion. The political consultations are currently taking place. The members of the M8 Alliance at the World Health Summit 2010 put out a statement on the importance of climate change on health. This statement was communicated via the national academies to the Governments of many countries and also sent to the United Nations and the World Health Organization (WHO). With success: The theme will be on the agenda at the upcoming climate conferences.

The annual World Health Summit and leading membership in the M8 alliance are of central importance for Charité and its strategic direction. „The World Health Summit is an important signal to the outside world for Charité, to assume international responsibility in health issues and to connect with the world’s most important medical facilities“. “This serves to illustrate the international role of Charité, but also to develop its scientific and political weight and,” says Professor Einhäupl. Beyond the M8 Alliance, Charité has also succeeded by means of existing cooperation agreements of individual institutions, in integrating the entire Charité into a network of excellent academic institutions. The Dean, Professor Grüters-Kieslich, also highlights the sharpening of the look of the Charité in the global context of health: „The World Health Summit and the cooperation of the M8 partners will help us move our work at Charité into an international context. This is crucial, because sickness and health do not respect national borders. The global challenges can be defeated only when they are met as a global community.

The next World Health Summit will take place from 23rd to 26th October 2011 once again at Berlin Charité.
Investing in the Future: Construction Projects at Charité

In many emergencies, every second counts. When a life is in danger, everything must happen quickly, the availability of a helicopter can be a matter of life or death. For a busy clinic, such as Campus Virchow-Clinic in Wedding, the need for a landing site, especially for transplant surgery and for one of the largest German pediatric clinics, is crucial. Unfortunately, the helicopter landing pad at CVK was no longer in compliance with regulations and, for several years, had been available for use only with special permission. The cost of needed new construction exceeded Charité’s financial capabilities. The so-called Economic Stimulus Package II provided support from the federal government. The decision was made in November 2008 that, in order to prevent job losses and insolvencies in the economic crisis, a new helicopter landing pad on the Campus Virchow-Clinic would finally be financed.

Following a decision of the Senate, Charité-Universitätsmedizin Berlin, was granted 20.3 million euros within the framework of the stimulus package from the portfolio of „Colleges“ for investment in educational infrastructure. In addition, the Berlin state government gave 12 million euros to the Charité for other infrastructure investments. With these funds, the Operations and Technology Division was able to begin some urgent projects, plans for which had been gathering dust in drawers. Charité’s goal was to use the funds from the stimulus package in a way that would maximize the number of projects that could be realized. The economic policy guidelines quickly met this challenge: companies from Berlin and Brandenburg, mainly from the construction and medical technology sectors, received the contracts and orders and delivered the needed materials. With the use of stimulus package funds, the local economy was strengthened, insolvencies averted, and jobs safeguarded.

New Measures to Help Save Lives from the Air

The new helicopter landing pad on the campus Virchow-Clinic headed the list of necessary projects. In the interim, a landing ban had been imposed, which threatened to endanger the lives of seriously injured people. The construction of the new landing pad took the ban’s prerequisites into account and was able to reverse it. The new pad is situated on the uppermost level of the multi-story car park. In constructing the landing area, 2.2 million euros were expended to reinforce the roof, 1.1 million euros of which were financed through the economic stimulus package and the remaining 1 million euros from the state investment grant to Charité. With the financial support of the state investment grant, the landing pad was equipped with heating so that rescue flights would be possible year-round. Further, an additional elevator in the parking garage shortened the distance from the landing site to the operating room. „The new landing site significantly improves emergency services security and is an enormous asset to Charite,“ said Christian Kilz, Director of Construction, Assets and Facilities Management and Deputy Head of Technology and Operations (see p. 31).

Improved Life-Saving Measures on the Ground

Modernization saves time and saves lives. True to this adage, the resources of the Economic Stimulus Package II were put to excellent use in renovating the special stroke unit: installing state-of-the-art technology at the Campus Benjamin Franklin. When the stroke unit was originally set up in 1996, it was with the recognition that with strokes, minutes can make the difference between life or death, lifelong impediment or full recovery. Given that most strokes are triggered by the clogging of a vessel that prevents blood from getting to the brain cells – and these cells begin to die within minutes – having the best equipment available is all the more critical. Around one million euros from funds provided by the state were used to fully upgrade the stroke unit.
and to relocate a magnetic resonance imager (MRI) in the unit's immediate proximity to facilitate both the diagnostic process and the beginning of the requisite treatment.

Other significant improvements achieved with the upgrading of medical equipment included a threefold increase in the number of monitored beds (from four to twelve), and the addition of 13 other available treatment locations. In total, the investment in the stroke unit has made an immeasurable improvement in both the medical care and the security of stroke patients.

The new interdisciplinary intensive care unit at the Benjamin Franklin campus underwent a similar renovation. The existing normal care station, which has a surface area of about 1500 square meters, was completely rebuilt and equipped with new technical infrastructure. The resulting surgical intensive care unit now has 30 beds, considerably expanding the capacity of intensive care patient care in the south of Berlin. „The relocation of intensive care is also essential for the planned renovation of operating rooms on campus,” said Christian Kilz. The extensive renovation and restoration measures were funded with 3 million euros from the economic stimulus package. The cost of the station's medical equipment, on about the same scale, was funded from the investment budget that Charité receives annually from the state of Berlin.

Development of Research Infrastructure

Another aspect of the development plan for Charité encompassed the specialization of research facilities at campus Mitte. The clinic focusing on rheumatology and clinical immunology was the highest priority in terms of making use of the Economic Stimulus Package II funding. The proximity of other rheumatologic research institutions, such as the Max-Planck-Institute and the German Rheumatism Research Institute, creates sustainable synergies for research and teaching. For the education and training of students as well as doctors and specialists in the field of rheumatology, the hospital is of primary importance. Over 2 million euros were invested within the framework of the stimulus package, to advance research and teaching capabilities, and the Institute's research facilities were rebuilt and outfitted with new equipment.

The lecture hall in the north wing of the Department of Internal Medicine campus Charité Mitte (CCM), built in 1900, was converted to four floors with a multidisciplinary center for advanced imaging; two high-performance tomography scanners have been installed. The experimental Radiology Department of Charité conducts research on two levels in the areas of the molecular imaging and MR-Elastography (automatic regulation of the elasticity of tissue for oncological diagnostics). On another two floors, the Bernstein Center of the Humboldt University and the Exzellenzcluster Neurocure of Charité conduct basic neuroscientific research. The equipment was funded by the Federal Ministry of Education and Research and the German Research Association; the construction, funded with 3.65 million euros from the federal government's stimulus package, is in dispute.

The largest project at Charité, also made possible with stimulus package funds, focused on further advancing research capabilities. This project included renovating the Institute building, formerly used as a dental clinic, on south campus Virchow-Clinic (CVK), and transforming it into a research center. A total of 19 million euros were invested (13.3 million euros came from stimulus package funds, 4.8 million euros from the European Regional Development Fund (ERDF), and about 0.5 million euros from Charité's budget). For this investment, laboratories, offices and seminar rooms were established in the former clinic, which can now accommodate several institutes of the Charité. „For many years after the dental clinic had moved out, the buildings were left empty. There were ideas for their future use, but no funds to implement them,” recalled Toralf Giebe, head of Technology and Operations.

Included among the newly co-located research institutions is the Berlin-Brandenburg Center for Regenerative Therapies (BCRT), where scientists in interdisciplinary working teams explore the
possibilities of regenerative therapies for dysfunctional cells, tissues and organs. Also associated is the Berlin-Brandenburg School for Regenerative Therapies (BSRT), whose scientific training concept has been recognized and awarded by the Excellence Initiative of the federal government. The findings of both institutions are to be included in long-term clinical treatments to benefit patients.

**Charité as a Builder**

„Noteworthy in the completed south campus project is the fact that Charité was able to carry out a renovation project of this dimension, independently carrying out the developer’s function “stressed Christian Kilz proudly... Up to now, no one credited Charité with this capability. We have shown that we can accomplish it. “

At the projects’ completion at the end of 2010, there was a sense of satisfaction with the cooperation of Charité subsidiary CFM. „Above all, in the area of planning, we have worked closely and successfully together with the architects and engineers of CFM as well as with the commissioned planning offices on the construction projects, despite small difficulties that arose on one project or another,” said Kilz.

**Sound Management of Budgetary Resources**

On the whole, Christian Kilz and Toralf Giebe look back with pride at the success of the building measures. „The time pressure was intense,” said Toralf Giebe. All projects entirely or partially financed through federal funding basically had to be completed by end of 2010. Again, no one had any confidence that Charité was capable of accomplishing this. And not only was the schedule maintained, the Business and Technology and Operations departments managed the money from the stimulus package so well that at the end there was money left over—sufficient money to finance two additional projects. Additional research and office facilities were furnished in the institute building south at CVK. There, the Julius Wolff Institute (JWI) and the Institute of Medical Genetics, Charité, now have more space to study the regeneration and the biomechanics of the musculoskeletal system and the improvement of joint replacement and fracture care.

**Quality in Large Quantities: Charité Pharmacy’s New GMP Area**

Through the window, an outline of a figure in an astronaut-like uniform is visible, wrapped in a white suit, with face, hands, and hair completely covered. The window looks into the cleanrooms of Charité Hospital Pharmacy, the new heart of the institution. In September 2010, a new “Good Manufacturing Practices” (GMP) area began its operations there. „Here, in our new aseptic manufacturing area,” said Dr. Susan Bischoff, the head of Charité’s hospital pharmacy since 2006, we produce patient-specific cytostatic solutions (i.e., drugs used in cancer therapy and aseptic preparations, such as parenteral nutrition solutions or medication for pain management), which are tailored to the individual needs of patients. In another of the pharmacy’s production areas, more personalized medicines are manufactured, such as dermatological ointments or low-dose capsules for the Children’s Hospital—products that are not offered by the pharmaceutical industry.

The production volumes at Charité’s pharmacy are very high: each year the pharmacy produces around 80,000 cytostatics, 20,000 parenteral nutrition solutions, 11,000 pain medications, 35,000 emergency syrings, and various other medications that need to be prepared under aseptic conditions. „The demand for our patients’ individually manufactured pharmaceutical products
is huge, and the trend is rising,” said Dr. Bischoff. The hospital pharmacy, located at Campus Virchow-Clinic, is the largest university hospital pharmacy in Europe. It supplies and advises not only Charité’s other campuses, but also the nearby German Heart Center, Saint Dominic Hospital, Paulinen Hospital, Evangelical Geriatric Center and Humboldt Mill Medical Park Berlin. Since 2007, through an agreement with health insurance providers, the outpatients at Charité also belong to its customer base; previously, support was available only for in-patients, and ambulatory patients had to receive their medications from public pharmacies. This change is an important improvement for the quality of patient care and well-being, above all, for chemotherapy treatment. Most patients are initially admitted to Charité to get their first chemotherapy. „After being released, they are now eligible for further treatment in the clinics, where we not only continue to provide them with the same quality,” explained Dr. Bischoff, “but also observe them more carefully to ensure their continuing tolerance of the medication.”

Ongoing Expansion of the GMP Area
The agreement Dr. Bischoff and her team reached with the healthcare insurance providers meant a considerable expansion of production; in fact, the volume almost doubled. Ultimately, this gave the final push to establish a GMP area: to guarantee the highest level of quality level despite higher levels of production. Although the pharmacy had, of course, previously produced aseptically, not all of the facilities met Class B requirements—the GMP standard. “While the safety workbenches, where the employees previously worked, corresponded to Class A (the highest category for cleanrooms), they were located in a Class C cleanroom (which allows more particles and germs than is tolerated in the standard Class B cleanroom), compromising the quality,” explained Dr. Bischoff. The new GMP area is a great qualitative leap forward. First, employees must follow strict procedures and go through cleanroom air-locks and multiple gowns before entering the work area. On entering the pharmacy, they must change from street clothes into blue scrubs. In the first air-lock, leading to the preparation room Class C are cleanroom gowns and slippers, hair and face masks, and the obligatory disinfecting of hands. Further steps are required before going through the second air-lock into the actual manufacturing area of the Class B space: putting on the sterile, particle-free cleanroom suits, which resemble astronaut suits and are subject to the most stringent cleanliness requirements. „Now, with the technical support of the cleanrooms and the appropriate clothing, it is easier to maintain our high quality standards despite the more demanding production level,” said Dr. Bischoff.

Intense Focus on Safety
The high standards and requirements of the GMP area are well founded. On the one hand, the safety of the pharmacy staff is ensured, as the use of cytotoxic agents is not harmless. The protective clothing helps keep employees from coming into direct contact with highly concentrated active ingredients that may be carcinogenic, mutagenic or toxic to reproduction. On the other hand, producing drugs under maximum clean conditions also increases the protection of patients. Air pressure, temperature and humidity levels in the GMP area are continuously checked by a monitoring system, as is the level of bacteria and particles in the various cleanrooms. The current worldwide GMP guidelines set very high standards for the monitoring system, special cleanroom technology, and, in particular, the ventilation system, because there is no tolerance for error. In the cleanrooms at Campus Virchow-Clinic, the air is filtered about 40 times per hour.

Additional Economic Benefits
The construction of the GMP area gave Charité an economic advantage as well. An alternative to establishing an in-house GMP department/area that would meet all qualitative requirements, even with increases in capacity, would have been to outsource pharmaceutical production - purchasing individualized drugs from an external manufacturer - at an enormous cost. “Our decision to construct our own GMP area had the added advantage of enhancing the character of service and
the economic efficiency of Charité. The agreement with health insurance providers is an example of this, because outpatient care is charged to the insurance companies, including not only personalized medicines, but also commercially available medicine directly administered to patients in outpatient clinics. The pharmacy, and in particular the GMP area, are designed so that if demand increases, it can be met with increases in the level of production, an important aspect in terms of further expansion. Charité’s decision was affirmed, as Dr. Bischoff stated: „The decision was correct and we have made a big step forward, especially in terms of the quality and safety of drug therapy.“

Logistics and Consulting
To ensure the quality of the purchased medications to patient safety and customer satisfaction, a Pharmaceutical Committee was established at Charité, whose operations are led by Dr. Bischoff. Doctors from the various departments were asked to develop a list of approved medications, which was then reviewed by the commission. The commission made a decision on every medication. As Dr. Bischoff explained: „This means that not every approved drug will be automatically prescribed at Charité—only those whose usefulness and quality have been proven.” One of the pharmacy’s tasks is to buy drugs in large quantities and deliver what is needed to the stations. Charité met this is logistical challenge with flying colors. Due to well-trained staff and a semi-automatic selection and loading system, the error rate in putting together the medicine orders is close to zero. Obviously, this is a big plus for economic efficiency and effectiveness. Customers especially appreciate being able to consult with and get advice from the pharmacy. Two of the 18 pharmacists are busy on the phone every day, answering questions from the attending physicians and other health care professionals. „We advise our colleagues on dosage, risks, side effects, drug interactions and the specific characteristics of some drugs, among other things. Although most inquiries are routine for their team, some are more complex and require a more thorough search. This is one of the services provided by the pharmacy.

Certification in 2011
Today, the new GMP area is fully operational, and the pharmacy’s next big project is already underway. In order to standardize all the procedures, processes and responsibilities not only in the GMP area, but in the entire pharmacy and covering all of their services, the pharmacy team plans certification according to the DIN EN 2011, ISO 9001 standard. An external consultant is already on-site, and TÜV (German Technical Inspection Association) has been requested to make the certification. Charité hospital pharmacy is looking forward to taking another big step forward for quality assurance.
Patients

Hedwig François-Kettner, Dr. Andreas Triltsch, Prof. Heinrich Audebert
The historical development of the nursing and health care professions in Germany has been closely entwined with the history of medicine since antiquity. In 1782, Heidelberg professor Franz Anton May took the first step toward making nursing an independent profession by founding a, public school for the education of initially trained nurses’ in Mannheim, which is now considered the first German school of nursing. In 1903, nurse Agnes Karll set another milestone by founding the Nurses Professional Association of Germany, a precursor of today’s German Professional Nursing Association (DBfK). The development of professional nursing has advanced continuously since then. For over 20 years, Charité has been rethinking the roles of nursing and non-professional personnel with the goal of making patient care both more effective and more efficient. In which areas could the delegation of nursing and non-professional tasks to service personnel enable the nursing staff to take on more professional medical tasks and activities? In the context of health care today, how could targeted staffing, aimed at the specific needs of patients, improve patient treatment by taking advantage of nursing expertise? At some clinics in Germany, the redistribution of nursing tasks has already begun. Charité has been in the forefront of this movement under the leadership of Hedwig François-Kettner, director of nursing since 1984. As a long-time Board member and current member of Charité Hospital Management team, she significantly advanced the project of restructuring ward duties.

**Successful Redelegation of Duties at Charité**

The delegation of duties in post-merger Charité has been under discussion since 2004. In 2006, the first pilot program was launched in Center 9, Charité Trauma and Reconstructive Surgery Center. With the experiment’s proven success, the project was expanded to Centers 12 and 13. Currently, the redelegation of medical tasks to nurses and of some nursing care tasks to service personnel for duties involving intravenous injections, drawing blood samples, handling of implanted port systems and intravenous catheters, among others, has been implemented in 40 of the 99 standard stations across all campuses. “Nurses and caregivers today know the patient best,” said Hedwig François-Kettner, and only they can notify doctors about the disease progression and any important changes in the patient’s condition. But due to the numerous non-nursing duties, such as running errands or food distribution, the time available on the stations for patient care, including relevant dialogue with medical personnel is, in practice, often short-changed.”

It is essential that the specific duties taken on by the service personnel from the nursing staff be determined by the needs and responsibilities of each individual station. As explained by Ms. François-Kettner, “The individual needs of the patients entrusted to us play a decisive role.” The responsibilities of the more than 40 service personnel currently active at Charité include providing assistance with admission, transfer, or discharge of patients and with various required maintenance tasks. With the redistribution, these employees take over cleanup, errands for patients, and food distribution. „You don’t need certified professionals to take dinner orders; in 90 percent of cases, this task can be delegated without problems,“ she added. A nurse must be responsible for tasks that relate directly to patient safety, for example, if a patient has swallowing difficulties and needs help with food intake. „These types of care decisions are tailored to the individual patient. Measures that are inextricably linked to the practice of nursing will not be delegated.”

**Qualifications of Nursing Staff and Service Personnel**

In preparation for their employment, service personnel must complete training courses and receive thorough briefings at the respective stations to which they are assigned. Continuing education is also a central component of the delegation of medical tasks. In order to take over professional medical tasks previously performed exclusively by doctors, nurses must pass qualification measures that were developed by Charité’s Health Academy. The Academy is also responsible for the training of student nurses and the continuing education of other health care professionals. „The new activities and responsibilities are integrated in the educational curricula of trainees, so that the new nurses - and those nurses with advanced skills - are already familiar with the relevant knowledge,” explained Ms. François-Kettner. The nursing staff must prove the requisite level of knowledge through theoretical and practical tests.

**More Time for the Patients**

Decisions made by physicians form the basis of the redistribution of tasks on the ward since certain activities may only be performed by physicians. Once these activities were determined, the next step was to delineate where and when nurses could independently take over some medical tasks or directly assist the physicians with them. The goal was to determine which activities would increase so-called patient bonding time—the time the nursing staff spends with the patients entrusted to them to improve the quality of their care.

„The question to be answered,“ according to Ms. François-Kettner, “was which particular medical tasks nurses could undertake that would enhance their personal contact with patients.”
Uniform rules and operating procedures for standard medical tasks had to be instituted to ensure that the nursing staff was qualified to assume duties previously exclusive to physicians. To test the quality of the delegation project, a mandatory documentation and quality management process had to be developed and implemented.

**Legal Certainty and Economic Efficiency**

„To ensure the long-term success of this restructuring all parties had to be ready and willing to rethink existing structures with the primary goal of cooperating to provide optimal care of patients entrusted to us,” emphasized Ms. François-Kettner. The framework for the optimization of the health care process and the implementation of a quality management system required changing some laws to ensure the legal protection of nurses. „New agreements with insurance providers were negotiated to provide nurses who perform medical tasks the same type of coverage as physicians, in case of an incident.” From an economic point of view, the restructuring also had to make sense. Fortunately, the new approach to patient orientation resulted in savings of both time and cost. Further, by transferring some medical tasks to nurses and some of some traditional nursing activities to trained service personnel, new employment opportunities were created. Some of the more straightforward tasks were assigned to less highly trained new employees. Everyone involved in the project agreed that the quality of patient care must remain the underlying criterion. While economic savings play a role, they must never outweigh medical considerations.

**Positive Feedback from All Sides**

A comprehensive evaluation of the pilot project was undertaken by Charité doctors, nurses, service personnel and patients in the wards, who were affected by redelegated duties. „The results of the strenuous evaluation were resoundingly positive,” said Ms. François-Kettner. Not only did all parties involved express great satisfaction with the restructuring, there was an unanticipated benefit: new service personnel showed an encouragingly high level of identification with their work, reinforcing their integration into the team on the wards. In addition, the evaluation highlighted that the restructuring also resulted in a range of improvements in patient care; for example, the distribution of drugs and infusions was more timely, since nurses no longer had to wait until the responsible doctor was available,” underlined Hedwig François-Kettner. Confirmed by the positive feedback, the delegation project 2011 has already been extended to other areas of Charité.
Suddenly one corner of his mouth is hanging down. The sentence started is not completed; syllables are twisted into incomprehensible sounds. Spontaneous paralysis, numbness in the arms or legs, visual impairment, blindness in one eye; the symptoms are unequivocal: A stroke has occurred. Now we need to act quickly.

A stroke is an acute injury to the brain caused by a disturbance in the blood supply. This can be caused by a burst blood vessel in the brain, which leads to bleeding. Far more common, however, strokes are caused by the blockage of a vessel by a blood clot, whereby the brain is deprived of its blood supply. Without adequate blood supply, the extremely oxygen-sensitive brain cells begin to die after just a few minutes. Many strokes result in lifelong disabilities, many also end fatally.

Approximately 250,000 people suffer a stroke each year in Germany. In the Capital alone there are about 12,000 a year. With approximately 1,400 cases per year, the Campus Benjamin Franklin, Steglitz is probably the hospital, which treats the most strokes in Berlin. Reason enough for Charité to particularly excel in this area, so that the patients get exactly the special therapy and care they need after a stroke.

The Welfare of the Patient in Focus
Stoke units are a central component of a rapid and successful stroke treatment. In these special units for stroke victims, in addition to the measurement of vital signs (body temperature, blood pressure, heart rate and breathing rate) they also provide continuous neurological monitoring. The stroke unit at the Campus Benjamin Franklin has been in service since 1996, which, was extensively expanded and modernized at the beginning of 2010. The number of monitored beds was increased from 4 to 12 and 13 more treatment stations were made available. Medical-technical devices to improve patient care were procured, for example, a completely new monitoring device that immediately sounds an alarm when a patient experiences a heart rhythm disturbance that could trigger off another stroke. Furthermore, the Steglitz Stroke Unit can now administer ultrasound examinations directly within the stroke unit. „In many large hospitals, the problem is that the patients must be moved over relatively long distances, in order to perform certain tests. During this time, patients are often not adequately monitored, which can lead to critical complications,” explains Professor Heinrich Audebert, Medical Director of the Department of Neurology at the Campus Benjamin Franklin. Our patients can now be examined directly at the bedside, which improves patient safety immensely. „A most extraordinary feature is the magnetic resonance imaging (MRI) unit, located directly in front of the stroke unit and reserved exclusively for stroke patients. Again, this is an enormous health care advantage, because short distances and the constant availability of the unit save important time, time in which the death of brain cells would otherwise progress further.”

By embedding the stroke unit in the Center for Stroke Research Berlin (CSB) patients are also able to profit from the newest scientific knowledge available. Professor Audebert is also engaged in research at the CSB. His interests lie not only in the development of new methods, but in the systematic implementation of effective therapies already available. „The aim of my clinical research is to shorten the time between the occurrence of the stroke and the administration of lifesaving treatment. “Moreover it is a matter of a better utilization of the already available possibilities,” says Professor Audebert. The modernization of the stroke unit was already an important step in this direction, the introduction of the Mobile Stroke Unit “STEMO,” in early 2011 is another highly significant improvement.”

Stroke: Every Minute Counts
Shortening the Chain of Rescue

Seen from the outside, the Mobile Stroke Unit vehicle looks like an ordinary ambulance. But STEMO has it all - in the truest sense of the word: The vehicle is equipped with computer tomography (CT) and a completely equipped emergency diagnostics laboratory. It is also designed so that radiation cannot leak out. Professor Audebert is head of the STEMO project: „The CT scanner is now sent to the patient, so that we can investigate on the spot“. Thus, valuable time is gained; time in which more brain cells would die.

A neurologist, a specially trained paramedic and an X-ray assistant are constantly on board. In addition, there is always a neuroradiologist available, the telemedicine transmitted CT images are immediately analyzed and evaluated. „Once it is clear that an acute stroke has occurred and a brain hemorrhage can be excluded by means of a CT scan, we can begin the thrombolysis,“ says the project manager. In nine out of ten cases, the cause of a stroke is a blood vessel being clogged by a blood clot. With thrombolytic therapy, the patient is injected with clot-dissolving drugs - in this way brain tissue is preserved.

The training of staff in the control center, where emergency calls are received, is also a central part of the new project. In close cooperation, Charité and the Berlin Fire Service have developed a questionnaire to identify possible stroke victims at the time of the initial call. „Only through such emergencies can this special vehicle be put to good use, because STEMO only makes sense in stroke cases or in cases of neurological emergencies,“ says Professor Audebert.

The STEMO is a fully functional ambulance equipped with stroke diagnosis equipment, the first of its kind in Germany. Science and industry have worked together in its development. In addition to Charité and the Berlin Fire Service, two companies from Berlin and Brandenburg were involved in the project. The project was made possible by the Future Technology Fund Foundation of Berlin, which supported Charité and the Berlin Fire Service with a total of € 1.93 million. An essential prerequisite for the project was the already existing excellent medical infrastructure of the Center for Stroke Research in Berlin. The integration of both enterprises from the region into the STEMO project also strengthened the economic location of Berlin-Brandenburg in the health service areas.

The Right Combination of Technology and Care

Modern medical technologies and treatments can be lifesaving in the treatment of stroke. Professor Audebert stresses, however, that the intensity of care has at least the same value: „Stroke patients are often very dependent; they are usually older and often have difficulty communicating. This makes them in terms of care, special patients. And they are treated accordingly at Charité. „In the stroke unit, well trained staff care for patients around the clock with intensity in consistently meeting the needs of the affected people.“ Professor Audebert further remarked: „Here we know that these cases can include specific disorders. Within the scope of treatment, we begin coaching the patients on rehabilitation services such as speech and swallowing and occupational therapy very early in their recovery program. “

The optimum composition of intensive care and the latest technology is exactly what Professor Audebert understands in the increased effectiveness by means of the improved use of existing possibilities. However, Charité sees itself as being responsible for the patients beyond their release from the hospital. Recovering stroke victims often feel overwhelmed with the necessity to independently take various medications. Many are not accustomed to physical activity, but it significantly contributes to improved health, particularly for stroke patients because the risk of another stroke or a heart attack during the first subsequent year is particularly high.

Intensified Secondary Prevention

In order to mitigate the risk of recurrence, the stroke unit not only relies on drug treatments, but in addition on behavioral recommendations. For this, the causes of the individual stroke are analyzed and discussed with the patient, Professor
Audebert: „We want to accompany the patient. Therefore, we inform him about the situation once again at the time of his release and offer him regularly scheduled outpatient appointments. In this way, we can verify that the risk factors are kept within acceptable parameters and regular drug intake is ensured“. 80 percent of patients take advantage of this offer. The extent and quality of the stroke unit at Charité become positively apparent: It was previously believed that only about one-third of all stroke patients fully recover, the current rate of around 55 percent recovery is now significantly higher. “In the case of thrombolysis, special treatments and subsequent counseling of stroke patients on stroke units, the health and life expectancy of those affected is improved considerably,” says Professor Audebert. In addition, we now have STEMO. Professor Audebert is confident that it will bring the all-important quick response time to stroke victims, which is once again another step forward.

In Good Hands at the Campus Benjamin Franklin

It is always an emotionally demanding situation for people to visit a family member or close friend on the intensive care unit. A severe accident has occurred, a preceding serious illness or a planned surgical procedure is often the reason for the stay. In intensive care units, patients with severe to life-threatening illnesses or injuries are treated. More than on other wards, this is a place where not only the patient but also often the family members must be cared for. “When family members come for the first time, we meet them in reception and explain the current health situation to them and prepare them for the meeting,” explains Dr. Andreas Triltsch, who is Senior Physician and Deputy Director of the Department of Anesthesiology with a main focus on the intensive care medicine of Charité at the Campus Benjamin Franklin (CBF). Additionally, he is also in charge of the surgical intensive care unit of the campus.

For nearly 20 years, Dr. Triltsch has been an anaesthetist at the hospital in Steglitz. The hospital itself was built in the 1960s. Since then, medicine and technology have made great progress. This benefits the patients, because new medical technology and monitoring devices contribute to their safety. Unfortunately the ultra-modern devices are not exactly small, on the contrary: „Today, the equipment takes up much more space, on account of several new features, which previously did not exist,” says Dr. Triltsch. In recent years, the supervision and care of patients in intensive care units has thereby improved considerably. Because of the necessary positioning of devices directly at the bedside, the existing intensive care unit has become increasingly too small.

Dismantled, Renovated, Renewed

Providing intensive care to patients in the South of Berlin was focused upon when Charité decided to change the situation: as a result, a new interdisciplinary intensive care and recovery ward was put into operation at the CBF. This followed a 12-month renovation period. The former general surgical ward was partially dismantled and transformed into a ward for intensive medical therapy and care, utilizing the latest available technology. The previous anesthesiological intensive care units and the general surgery recovery rooms were merged. There are now 30 intensive care beds available on approximately 1,500 square meters. All patients who are cared for have undergone major surgery or severe injuries or must be particularly monitored due to serious underlying diseases after surgical interventions.
The extensive renovations were financed equally from the funds of the economic stimulus package of the Federal Government and from the investment budget, which Charité receives annually from the State of Berlin. In total, €6 million in the optimization of patient care and in the future of the Steglitz campus were invested. An essential condition for the planned renovation of the operating rooms on the campus was fulfilled with the move of the intensive care units. "With the new intensive care unit and other upcoming construction measures, we are sending an important signal outward as Charité," added Dr. Triltsch.

Medical and nursing staffs are most familiar with the requirements, subsequent to operations and the needs of the patients and were closely involved in the design of the new intensive care unit. The result is impressive: everything is much more generous, a comfortable color design, each room has natural daylight - an important aspect regarding the mental state of patients - and what is more, the ward also has a pleasantly decorated visitors room.

New Structures for Rooms and Work
All patient rooms are connected by a second side door. This relieves the main door, which is often used for deliveries. Above all, the care of the patients was considered in this design: the connecting doors result in a shorter walking distance for the nurses, who can thus better monitor and respond to the people entrusted to them. Compared to other departments in the hospital, the intensity of care in intensive care units is much higher. On the new intensive care unit, each nurse is responsible for two intensive patients or four supervision patients. In total, more than 100 orderlies and nurses are employed, per shift, and 13 to 14 members of staff are on duty. In order to allow the nurses to remain constantly near their critically ill patients, each room is equipped with a computer workstation, from where at any time the electronic medical record can be accessed. Also, X-rays, laboratory parameters, as well as the prescribed medication list are always available. In this way, the patients remain under continuous observation, even if something urgent must be checked or entered into the file.

Technically up to Date
On each bed, there are numerous other devices, allowing the vital signs of patients to be measured continuously, as well as the possibility to administer respiration assistance in up to 24 patients. Using a battery of drug syringe pumps, which can be adjusted to the individual and situational needs of the patient, the patient can be continuously supported with the prescribed medication for calming the patient or providing pain management. Also, cardiovascular supportive medications are administered via syringe pumps. Much of the equipment was purchased new in the course of the construction renovations. The station has two mobile units, which ensure that patients are always optimally medically monitored and cared for during transport, as well as at the fixed handling sites. The spatial changes have resulted in an improved structure of the workflow. „It is now easier to continuously ensure the best possible patient care,” says Dr. Triltsch. “For example, in regard to the strict hygiene regulations, which apply in intensive care units and which always constitute a challenge. It was previously assumed that pathogens were brought from the outside to the ward; we now know that the highest danger of infection comes from the unwanted spread or transmission of pathogens from one patient to another. „Many patients are in addition to their disease easily transmissible agents in themselves,” explains Dr. Triltsch. „For our work this means taking the greatest possible care, because our seriously ill patients often already have a weakened immune system and as a result, are particularly vulnerable to infectious diseases.”

Interdisciplinary Care
At the new intensive care unit in Steglitz one is in very good hands, which is not only due to the progress in medical technology or the new rooms. Without the experience and commitment of nurses and physicians the complex workflow
would not function. The nurses on the new ward had previously worked on the former intensive care and recovery units at the Campus Benjamin Franklin. Now, for their first time in their career, a number of nurses are caring for seriously ill patients. „The teams are growing together, and we learn with and from each other,” says Dr. Triltsch. „Nurses, who until now have not provided the highest level of intensive care to seriously ill patients, are required to attend appropriate training courses. Nurses on intensive care units are heavily involved in therapy and diagnosis and these functions are due to the higher care needs beyond the normal levels on other wards.“ When considering the medical staff on the new intensive care unit, the term „interdisciplinary intensive care unit“ is clearly explained. As in the case of intensive care units in Germany, the CBF intensive care unit is under the direction of an anaesthetist. 19 other doctors from the Department of Anaesthesiology also work on the unit. There are four surgical and two trauma specialists. Dr. Triltsch remarked that the specialist team had basically already worked in an interdisciplinary mode. „As anaesthetists, we care fundamentally responsible for all patients who have undergone surgical procedures.“ Nevertheless, he emphasized the benefits arising from the new management team: „On our new unit, the interdisciplinarity is now also organizational.“ This means that on the ward, regular practitioners of various disciplines are active and are continuously on site. „Among the doctors of different disciplines, a profitable learning process takes now taking place.“ The interdisciplinarity for patient safety is; as well as being rewarding, also constantly available, and what is more, can be lifesaving due to the short distances involved between treatments.
Facility Management Successfully Restructured

The year 2010 was marked by numerous changes within the business section of facility management at the Charité. When Toralf Giebe assumed his post as head of this business section in September 2009 he benefited from the inside knowledge he had built up over the previous years in the Charité’s facility management and its structures. He was able to quickly and successfully give a boost to the business section after a thorough analysis of the existing work processes.

“As one of the Charité’s many institutions, the business section of facility management strategically plans, coordinates and partly executes all essential non-medical services of the hospital,” describes Toralf Giebe the activities of his business section. The section is divided into three divisions: for one, construction, facility and estate management (BAFM) is in charge of all major construction projects as well as of all minor measures in everyday business such as room planning and the management of all leased property of the hospital (see p. 17). This division is also responsible for the further development of the Charité’s master plan. Here, the employees work on a long-term perspective for all buildings and facilities on the various campuses. The second large division is the hospital’s pharmacy, which has been managed by Dr. Susan Bischoff since 2006 (see p. 19). All pharmaceutical consulting and all preparation of medicines according to the patients’ profiles is the pharmacy’s responsibility as is the entire logistics of medicines. The third division of the business section is purchasing. The procurement of all goods and services required by the Charité are the division’s responsibility – from large technical equipment to all medical and non-medical consumption goods. Two key operations report directly to the head of facility management: the subcontracting agency of the Charité, which examines all aspects of subcontracting for the Charité and its subsidiaries for all orders and other measures of procurement. The second is strategic facility management, which coordinates and monitors all contractual relationships to service companies such as the Charité Facility Management GmbH as the most important one with more than 2,000 employees under its wing. More than 160 employees work for strategic facility management.

Creating clear-cut Structures

Toralf Giebe’s goal when restructuring the business section was clear: “We aim to be the business section that makes things possible – we do not wish to be an agency of obstruction! Every process must be designed to quickly and reliably execute all requirements of the hospital and the faculty despite all economic restrictions,” he says. “In order to reach that goal we must focus on the essential challenges and must curb dual structures and muddled responsibilities.” Giebe has successfully initiated the reorganisation. He is being supported by Christian Kilz, whom he has made assistant head of facility management and manager of the division of construction, facility and estate management in March 2010. In close cooperation they have managed to recongnise construction management in a way that it works more effectively both in regard to everyday operations as well as in regard to the strategic master plan for long-term campus planning. “Many of our employees must make decisions and organise things on a daily basis and it is our job to give them clear guidelines for doing so. Our employees must know when they are free to act on their own and when further consultation is necessary. There is no bigger obstruction than work processes that are continually postponed due to uncertainties and intransparencies and thus can never be executed,” says the head of the business section.

One actual result of the reorganisation is the Jour Fixe of construction management. “The central issue was whose final responsibility it really is whether certain construction measures at the Charité are eventually executed or not. We needed to have a clear set of rules for making these decisions,” explains Toralf Giebe. Formerly, many colleagues from all over the Charité approached facility management directly with ideas for all kinds of improvements on buildings and facilities. Due to financial restrictions, sensible priorities had to be put into place. To realistically assess costs and feasibility, a mechanism of check and release was implemented. All proposals that meet the formal requirements are presented at the Jour Fixe of construction management. Christian Kilz was chiefly responsible for setting up the structure of this compulsory meeting. “Ten colleagues with proper decision-making authority from clinical care, from faculty management, from hospital management, from the staff allotment agency CFM, from financial management and from our business section take part in this meeting. When a proposal has been accepted and a way of financing has been found, proper measures are taken to execute that proposal,” he explains. At the time, this committee is chiefly concerned with projects that aim to increase the profitability of the hospital. This takes pressure off the executive board of the Charité, which was formerly deeply engaged in these processes, and is now being involved only in measures of chief importance. In all, this is a sound and feasible solution for all parties concerned.
Good Cooperation with the CFM
The execution of construction measures is often done by the CFM, which is one of the Charité’s spin-offs and from 2006 has taken over all non-medical services from waste management to catering, cleaning and central sterilization. The business section of facility management is the interface between the Charité and the CFM. All strategic targets of the Charité are introduced to the CFM and proper execution is ensured. “I consider it one of my main responsibilities to further develop the cooperation between the Charité and the CFM,” says Toralf Giebe, who is also one of the two managing directors of the CFM since 2009 and thus responsible for some 2,300 employees. “Naturally, the cooperation is not picture perfect yet,” he says. “But we have managed to reduce friction in many areas and the success we have had over the past year motivates me greatly to take on the challenges ahead.”

In 2010, the contractual services of the CFM have been optimized for the years to come. Doing so, facility management has managed to realize additional annual savings of € 5 million for the Charité in 2011 and 2012.

Process Optimization and Cost Reduction in Purchasing
Strategic operation is one chief aspect in the division of purchasing. It is a major challenge to procure all necessary goods and services—be they big or small—for the Charité, one of the largest academic medical centers in Europe. Since January 2010, the Charité cooperates with the Comparatio Health GmbH, a purchasing pool with nine other academic medical centers. Through central negotiations and the purchasing of larger quantities, the purchasing pool aims to optimize purchasing processes and save money. In its first year of membership with Comparatio, the Charité has managed to realize a cost optimization of € 1.3 million. The next goal will be the concentration of purchasing activities on a regional scale in cooperation with Vivantes.

Pharmacy: Expanding Care Services
The third column of the business section, the pharmacy, was also marked by changes in 2010. An aseptic preparation zone for medicines was designed and put into practice. With this decision, the executive board of the Charité underscored the service character and the approach to profitability of the pharmacy as its own GMP-zone (‘Good Manufacturing Practices’) will safeguard the quality of individual medicines and the preparation of larger quantities. The demand for products and preparations has nearly doubled over the last years. The key reason for this development is an agreement with the statutory health insurance allowing for servicing outpatients—where formerly only inpatients could be serviced by the pharmacy. The advantages for the patient are self-evident: even after release from the hospital he will be serviced with consistent quality.

Continuity and Sustainability
Toralf Giebe and Christian Kilz are aware that the reorganisation of the business section may also bring turbulent times for the employees. “Changes in organisation and new faces in management invariably bring uncertainty,” Giebe knows. “It is important to emerge from this process of change as the stronger player, especially in light of the challenges ahead such as the high rise renovation in Mitte.” Toralf Giebe and Christian Kilz are of one mind: they stand for the continuity of the business section of facility management.
In the middle of Berlin-Wedding, something hidden/tucked in the courtyard of a former industrial area it is to be found: The Health Academy of the Charité. Although, the department with all it has to offer does not need to hide. Since 2005, the Academy brings together education, training and continuing education at the Charité for health professionals. Since 2008, they have joined together under one roof in the Oudenarder Straße 16. Around 550 young people receive their professional training here. The offer ranges from health and medical care through speech therapy, dietary assistant, midwifery and physiotherapy to surgery and Technical Assistance and autopsy and dissection preparation assistance. With around 350 students, nursing care is the largest sector of the academy. In 2010, a total of 193 trainees successfully passed their exams.

However, the Health Academy is not just a training ground for the next generation. Moreover, the qualifications of the already experienced professional staff of the Charité are the responsibility of the Academy. And very successfully: In 2010 about 4850 people took part in various continuing professional education courses, seminars and training sessions. In addition to members of the Charité, participants from the external health sector also used the Health Academy offers. Due to this aspect of the training possibilities available, the Health Academy was able to distinguish itself as one of the relevant educational institutions in Berlin.

**World Premiere: New Standard for Educational Institutions**

“A balance which is worthy of notice”: stated the educational Director of the Health Academy, Dr. Marianne Rabe. And yet she still has plans: Together with a team of four employees, she implemented a quality management system. They were so successful that the institution was certified in autumn of 2010 by the German Institute for Standardization (DIN) to the EN ISO 9001:2008 DIN Norm. And as the first facility worldwide – to be certified under the new DIN ISO 29990:2010, became certified twice. „The 9001er Norm is an industry standard that regulates the formal foundations of quality management. „The other Norm concentrates only on learning services in the training and education services and specifically looks on substantive and procedural requirements for educational institutions,“ says Susanna Mittermaier, quality management representative of the Health Academy.

Like many institutions of the Charité, the Health Academy has experienced significant restructuring following the 2003 merger. Because of the size of the institution and the heterogeneous working traditions of the employees formerly working at various locations the need for binding and comprehensible structures became especially clear. „With the quality management system, we wanted to encourage the continued development of the curriculum, achieve more satisfaction for our customers and employees, and to strengthen the market position as well as raise the profile of the Health Academy and the Charité,“ said Marianne Rabe, explaining the motivation for the certifications. In order to meet this requirement, the internal quality management team has prepared the Health Academy for a total of two and a half years with the assistance of an external consultant for the exam. „If you want to create standards of quality management in a large body such as the Health Academy, it must not only concentrate on individual measures. Rather the development of the entire organization is on the plan,“ explains Susanna Mittermaier.
Signalling Effect Internally and Externally
Accordingly it was necessary to develop a clear presentation of the individual business processes, the concrete and binding description of tasks and activities, as well as transparent communication channels. „Quality management means that one is aware of the processes within the organization; and in this way detect errors and omissions, to recognize and finally turn the right screws until the processes are optimized,” said Marianne Rabe. Of course, the training centre of the Charité has long provided high quality services. Nevertheless, by the intensive study of the internal processes one could still discover some „missing links” and close them.

Education is at the heart of the Academy. The participants in the education, training and further training were therefore the focus of the organizational development. For customer satisfaction the importance of quality control of teaching plays an important role: interviews with the participants, feedback sessions and questionnaires at the end of a teaching block has long been common practice at the Health Academy. Nevertheless a uniform regulation on how to deal with the evaluation information did not exist. In assessing existing feedback, while developing new content and methods of teacher evaluation, the evaluations were often not considered adequate. „Earlier these important feedbacks for our work were sometimes simply lost among stored training material. “Now, the standards require us to assume greater liability,” said Susanna Mittermaier. It is now clearly regulated by procedure that any kind of feedback must be documented and filed away. In addition, an anonymous evaluation form was developed which is currently being tested. With the results, the quality of teaching will be further developed - for the satisfaction of customers.

Allow Discussions
The Health Academy now maintains systematic order. In the so-called document control of the quality management system, no file gets lost and is always retrievable, in the current version, for the employees of the educational institution. The document control ensures that all working documents are stored on the server in the appropriate folders. In addition, everyone is obliged to always specify the scope, the responsibility, as well as the dates of release and the next review indicated in the document. These requirements are now helping work processes flow more smoothly.

„However, a few innovations have also created internal resistance,” reports Marianne Rabe. „Some were worried that everything would become unnecessarily unified. Some did not want to give up their individual areas or their individuality and identity. But the resulting debates proved to be extremely fruitful and the discussion process helped involve employees directly in the implementation of quality management. „It was very important from the outset that the colleagues did not see the new processes as dictated, but that they help shape the quality management system, and live accordingly. Only in this way could and can it work permanently.” In the meantime, there are now many positive feedback messages. The staff perceive the clear, streamlined structures as progress.

Go forward Purposefully
In particular, the management system was the focus of the auditors who checked and reviewed the Charité facilities for four days. This includes all core processes of an operation of personnel management and market analysis, risk management and control of the management of errors and objectives. While checking the target management Dr. Marianne Rabe and her colleagues have encountered another gap: „Although we have for some time held target agreement talks with our employees.” And of course we have also defined the objectives of the Academy. „But the connection of the different target levels was previously not transparent,” says Marianne Rabe. „One only has to learn,” that this is a crucial point in the management system. „Now we will define not only the annual goals of the Health Academy, but also objectives for the individual areas.” They are coordinated with the
respective leaders. “On this basis the area managers agree to individual goals with their employees, so that we now have a logical target system.”

**Worthwhile Excellence**
The implementation of a quality management system means more work initially; they should have no illusions, the parties agree. „But it is worthwhile, because in the long term work is saved and qualitatively further developed,” believes the Director of the Health Academy. In the end, everyone benefits: employees, trainees, participants of the training and further education - and the entire Charité. The Quality Seal has an important signal effect for their image in the market - an essential aspect in the face of increasing competition. Marianne Rabe: „Given the demographic trends, the number of applicants will decline in the future. All the more important is that we can now prove, on the basis of the certification, that the Health Academy is excellent” - as is the Charité”. In this way, the Health Academy is helping to ensure the future viability of the Charité. Internationally, the certification has already caused waves: already two Delegations from Japan have traveled to Berlin to learn from the Charité. Despite the location hidden in the backyard of a former industrial area in Wedding, the Health Academy of the Charité has acquired an internationally visible reputation.

**Setting a Sign against Domestic Violence**
At a first glance, it is an ordinary apartment: kitchen, living room, bedroom and children’s room. But on closer examination, the supposedly idyllic home turns out to be a place of violence and oppression. Under the title „Rosen Street 76,” Martina Woelk and her colleagues, Claire Hemmert-Seegers and Marion Petzke-Boshof, managed to organize an exhibition on the issue of domestic violence. For over 20 years, the three nurses have worked in the emergency room at the Campus Benjamin Franklin in Steglitz. They have frequently seen cases of domestic violence. In 2010, they jointly decided to place the subject more into the focus and perceptions of the public. In a reconstructed three-room apartment, they demonstrated to the staff of the Charité and all other interested parties, domestic violence in all its facets. The exhibition was open to the employees of the Charité and the public from 11 September to 10 November 2010 on the first floor of the Campus Benjamin Franklin in Steglitz.

**Reality Checks and Sensitizing**
„By means of this exhibition, our goal was to raise the awareness of our nursing and medical colleagues to the issue of domestic violence,” as explained by Marion Petzke Boshof, as being the motivation for the project. The aim was to break taboos and to call a “spade a spade”. In this way, the organizers hope, that the hospital staff will find it easier, in the future, to identify victims and to directly address alleged abuses. Doctors and nurses are often the first people that come into contact with the victims. „Unfortunately, many cases of violence remain undetected,” says Martina Woelk. “There are women who readily say that they are victims of domestic violence”. But most will not speak about it or respond with denials, if we ask them directly. This is, actually, the problem.” But we wanted to reach not only the hospital staff but also family members, acquaintances, neighbors - and of course the victims themselves. „We wanted to show these women that there are ways to free themselves of these
situations of domestic violence,” says Claire-Hemmert Seegers. “The main problem is that many women think it is their fate that they are the only ones experiencing this kind of thing.” In the exhibition, the nurses saw an important tool to combat this feeling of powerlessness.

**Small Apartment - Big Issue**

“Wounds do not always bleed” was the title of an information panel, which the visitors found next to a box of Valium tablets in the kitchen of the reconstructed apartment. Next, it was learned that 46 percent of victims of domestic violence suffer from depression - up to inflicting self-injuries and suicidal thoughts. Walking through the three-room apartment, the visitors were given further information on different objects that made the manifest violence in all its forms tangible. The knife-edge news: In the USA on average, three women are murdered daily by their husbands or partners, in Russia there are nearly 40 murders per day. A doctor’s sick note on the coffee table made the drastic consequences of physical attacks evident. A savings book in the living room cabinet made the catastrophic financial consequences of domestic violence clearly visible. The way out of the apartment led visitors through a curtain with quotations from victims and perpetrators, this had a direct effect on the visitors, who were touched - in the truest sense of the word - in particular, by the stories.

However, the organizers wanted to raise awareness, not only of a taboo subject, but also to identify possible solutions: in the Forum of the exhibition, posters and a presentation on successful strategies against violence provided information. Accompanying the exhibition, were numerous lectures. Representatives of women’s shelters, organizations for the prevention of violence and child protection services and the Berlin Police Force reported on their work and the assistance available for victims. The concept of the exhibition originated from the Evangelical Church in Westphalia and the relief effort: „Bread for the World.“ Since its premiere at the World Church Congress in 2005 in Hanover, the idea has already been adopted at home and abroad by many initiatives.

**Tireless Commitment to a Good Cause**

The idea to hold the exhibition at the Charité, came from three of the nursing staff on the occasion of the event „10 years of S.I.G.N.A.L. “ with the theme: „Violence against women“ in February 2010. The first step was to raise the necessary funds to finance the project. The Nursing Director, Hedwig François Kettner, provided the first funding for the project. Already in 2001, the association S.I.G.N.A.L. had been awarded the Margherita von Brentano Prize for achievements in the removal of taboos on the subject of violence against women within the health care system of the Free University of Berlin. The prize money was administered by the Nursing Director. The exhibition project: „Rosen Street 76“ could be started with part of the funding. After numerous e-mails to organizations, associations, political groups and parties, they achieved further success: The administration department of the Berlin Senate responsible for the project: “Women in special conflict situations and walks of life” in the Berlin Senate for Economics, Technology and Women’s Department, showed their willingness to support the project. Now the time had come for the three organizers to organize space and rooms to complete the reconstructed apartment and set it up with all the furniture and other items necessary to show a domestic environment - for they had the ideas for the exhibition, but unfortunately not the exhibits. It would have to be created from scratch.

They received strong support from many sides, especially from their colleague, Male Nurse Matthias Mengel. He researched, for example, for suitable video clips in the Internet, which were shown in the apartment on a monitor; and always stood by in an advisory capacity. The employees of the Charlité Facility Management (CMF) were also highly committed. Together with a graphic designer, the nursing staff developed flyers and posters, to inform the Charité co-workers and the public about the exhibition. In addition, a press statement followed and the launch of a website. From April until the opening in September, everybody concerned worked tirelessly on the joint project. One special feature: in addition to their normal duties, the three
women involved did all that was necessary to get the exhibition off the ground. „The last summer completely passed me by,” says Martina Woelk and laughs. In spite of the serious theme and many hours of extra work, everyone involved in the co-operation had a great deal of fun.

On Campus Benjamin Franklin, more than 1,000 people visited the „Rosen Street 76“ ex-hibition - the title is borrowed from the original exhibition. The response was overwhelming. „A very important and very well done show,” one visitor wrote in the guestbook, two others commented - „astute” and „gets under your skin.” The organizers also reached a wider public through newspapers and television coverage.

Domestic Violence is not an Isolated Case
Martina Woelk, Marion Petzke-Boshof and Claire Hemmert Seegers have illuminated an important issue with „Rosen Street 76“. According to statistics, every fourth woman in Germany is a victim of domestic violence. In Europe, it is the greatest threat to the health and the lives of women, in the age group 16 to 44 years. According to the European Union, domestic violence affects more women than cancer or car accidents. In two-thirds of cases, the perpetrators are known to the victims, the motives are usually power and control over another person. Domestic violence does not only mean physical and sexual abuse, but also psychological and social cruelties are included. The consequences are manifold, ranging from physical injuries to sleep disorders, depression and even suicide. Studies also show that domestic violence is the same universally, regardless of class or income. Every year, 45,000 women in Germany are placed in protective shelters. The police also offer help and there are many women’s emergency call centers and telephone counseling services.

S.I.G.N.A.L.-Intervention Program
The Charité also supports victims of domestic violence. As early as 1999, in the emergency room at the Campus Benjamin Franklin, the intervention program to combat violence against women in the medical field (S.I.G.N.A.L.) was implemented. Meanwhile, the program is well established at all campuses of the Charité. The goal is to recognize domestic violence and to offer discussions and information about support, in addition to medical care. An intervention questionnaire, which provides a standardized legal documentation of the violence, is also part of the program, which is supported by the same association „S.I.G.N.A.L. - Intervention in the Health Sector against Violence to Women e.V.”

Claire Hemmert-Seegers is a board member of S.I.G.N.A.L. inc. and welcomes the activities of the Charité. The Charité trains its nurses and doctors in the medical and the legal aspects of domestic violence, as well as psychologically, to allow them to converse with the victims. „This is a key approach, because women, who experience domestic violence will eventually seek the help of a doctor.” “Therefore, it is important that people who work in healthcare, are trained,” says Ms. Hemmert-Seegers. Now, at the Campus Virchow, a re-vival of „Rosen Street 76“ is being planned. The exact date is not yet certain. But the three organizers have already offered to support their colleagues in Wedding.
Research and Lecture

Prof. Peter Hufnagl, Prof. Norbert Suttorp, Prof. Christian Rosenmund, Prof. Klaus-Peter Hofmann
A Search Engine for Tissue Sections: Project „Virtual Specimen Scout“

Every year, about 450,000 people in Germany are diagnosed with cancer, and some 216,000 people die from it. For this, as for all diseases, the faster a reliable diagnosis can be made, the sooner therapy can be initiated, increasing the chance of recovery. Equally important, the more reliable the diagnosis, the more often unnecessary and potentially harmful treatments can be avoided. In the case of cancer, only a pathologist can present a legally binding diagnosis. It is critical to interpret the tissue images from the microscope accurately so that malignant tumors can be detected.

When Peter Hufnagl came to Charité in 1981 to join the research group „Automated Microscope Picture Analysis,“ it was with the considerable advantage of being in one of the few working groups at Charité to have had a computer. „The computer was as big as a wall unit,“ recalled Prof. Hufnagl. Charité in the time of the GDR was already in the forefront in the field of automated image analysis. Now, 30 years later, telemedicine has become a nationally recognized proficiency in Berlin, in part, due to the many years of expertise garnered through Charité. Prof. Hufnagl has remained a steadfast and significant contributor to Charité. He has headed IT and Digital Pathology at the Institute of Pathology since 1987, and his research interests still center on automated image analysis.

Today, digital images are increasingly used for the diagnosis of tissue samples. State-of-the-art equipment allows pathological tissue sections to be scanned at high resolution and analyzed by virtual microscopy. With Internet networking access is available to virtual tissue sections from around the world, and sharing information with colleagues online is by now customary. Virtual microscopy is widely used in education and training as well. „The really revolutionary potential of these technologies lies in routine diagnosis - at least 50,000 cases a day in Germany alone,“ said Prof. Hufnagl.

A Digital Image Databank

In pathology, as in many other medical disciplines, comparison with reference cases is crucial to diagnosis; pathologists look for tissue preparations with confirmed diagnoses, which are similar to the one currently being examined. In practice, this means that previously, the pathologist consulted medical colleagues, medical atlases, or more recently, the Internet to look for tissue preparations with confirmed diagnoses, which are similar to the one currently being examined. In this way, the amount of area to be compared is reduced to about five percent, saving time and effort, and above all, increasing the level of precision.

In addition, the software will facilitate the measurement and assessment of complicated structures during the diagnostic screening. In the future, it will be possible to locate reference

Quicker and More Reliable Diagnoses

In the long term, Virtual Specimen Scout will support three functions that will benefit the pathologist, and, in turn, the patient. The first feature facilitates the pre-diagnostic analysis and the recognition of areas relevant for diagnosis. Because of the image size -an area of up to 300,000 x 500,000 pixels - the digital images are very large. „The high-resolution scanned histological tissue sections would, if printed out, fill up half a soccer field. These would have to be examined in detail, accurately and comprehensively, to allow a comparison with other preparations of the same size,“ according to Professor Hufnagl. To help make a fast and reliable diagnosis feasible, the researchers and scientists train on Virtual Specimen Scout by recording the pathological paths, which are the steps that lead to examining a tissue specimen for diagnosis. In this way, the software system should be able, in the long term, to carry out an automated preliminary analysis of the digitized tissue sections. The pathologist can, early in the process, gain insight into, for example, especially relevant areas of the tissue sections.

With his research team, Prof. Hufnagl is compiling a database with thousands of histological tissue sections. Each record includes the medical context of the tissue sample, such as the sex and the age of the patient, as well as the clinical and pathological findings. The catalogued diagnosis is always confirmed by a second pathological opinion, so that erroneous diagnoses are excluded. The software system should be able, in the long term, to carry out an automated preliminary analysis of the digitized tissue sections. The pathologist can, early in the process, gain insight into, for example, especially relevant areas of the tissue sections.
cases not only on the basis of the nature of the tissue sample or the patient’s age, but also by means of significant features, for example, the core size distribution, which is not visible to the human eye.

On this basis, Virtual Specimen Scout can then make a comparison of the currently examined tissue sample with thousands of reference cases and identify similar ones. The advantage of the „Patho-search engine“ is that it reveals not only cases where the confirmed diagnosis corresponds to the proposed diagnosis of the current sample, it will find all cases that have similar histological characteristics. This output is a large step forward for patient safety, because the database broadens the scope of pending differential diagnoses and reduces the risk of misdiagnoses.

A New Tool for Pathology
Prof. Hufnagl sees Virtual Specimen Scout mainly as a tool for pathologists: „The new system can aid pathologists in fields in which they may be less familiar, by helping them formulate specific proposals for the diagnosis.“ The data allow the pathologist to focus faster and better. Given that many significant medical decisions are made on the basis of the diagnoses from pathology, a misdiagnosis can have fatal consequences.

Prof. Hufnagl sees another concrete area of application in research. Once Virtual Specimen Scout is operational, it can help answer new scientific questions. Through the search function, it will be possible to find new connections between different clinical pictures and to analyze the samples more accurately.

Research and Industry Cooperate
The Virtual Specimen Scout project is an excellent example of a university research group and business enterprises working together. Involved in the project are the Pathological Institute of Charité, the Institute of Computer Science Research and Microelectronics of the Technical University (TU) Berlin, Charité spin-off VMscope GmbH, and Nexus/DIS GmbH. The cooperation of the four project partners is admirable. At weekly meetings, information about progress is exchanged and discussed, and next steps are outlined and coordinated.

The responsibilities of each partner are clearly defined. Charité Berlin and the Technical University Berlin concentrate on research. „In contrast to other projects, our objectives as well as our research findings are integral to concrete product development,“ explained Prof. Hufnagl. Charité spin-off VMscope and Nexus/DIS GmbH integrate the results of research into existing and new products and provide for software use and distribution, along with access to reference data. As some technical procedures of the project have already been licensed by Charité, the resulting revenue feeds into the external funding.

Developing Regional Competence
This future-oriented research project is being financed by the European Union. In summer 2009, the Technology Foundation Berlin (TSB), in order to promote the Virtual Specimen Scout project, authorized funding from the Future Fund Berlin in the amount of 1.2 million euro. Future Fund Berlin promotes strategic research and development projects in Berlin with funds from the Berlin state government and the European Regional Development Fund (ERFD). In November 2010, Dirk Ahner, EU Director-General for Regional Policy, visited the project and expressed his enthusiasm. „Bringing together companies and research will certainly continue to be one of the priorities,“ he announced at an event in the Institute of Pathology, Charité, where Berlin’s Senator for Economics, Technology and Women, Harald Wolf; Chairman of the Board of the Charité, Prof. Karl Max Eihhäupl; and Director of the Institute of Pathology, Prof. Manfred Dietel; among others, participated.

The project serves to further develop Berlin telemedicine competence, thus strengthening the region of Berlin as a whole. There is already keen interest in Virtual Specimen Scout in Germany and Europe. Prof. Hufnagl and his team have introduced the project at several conferences, such as the annual
meeting of the German Society of Pathology, the Tenth European Congress of Telepathology in Vilnius, Lithuania, and the Fourth International Congress for virtual microscopy. In March 2011, the research group published their first results in the online professional journal, „Molecular Pathology.‟

Advanced Collaborative Research at Charité

Although it does not attract as much attention as cancer or cardiac infarctions, lung infection remains the most common disease, leading more often to hospital stays than strokes or cardiac infarctions. Every year, about 750,000 people in Germany develop a lung infection, caused by a virus or bacteria. Children, the elderly, and patients whose immune systems are already weakened are especially susceptible. One-third of those with community-acquired pneumonia must be hospitalized and treated as inpatients; some 14 percent of these patients do not survive the disease. Professor Norbert Suttorp, director of Charité’s medical clinic focusing on infectious diseases and pneumology, has established a research group whose goal is to reduce this number significantly. The concept of the project, combined with the existing expertise and substantial networking capabilities of Charité, convinced the review committee of the German Research Council of its value. In May 2010, it approved the new Collaborative Research Center SFB Transregio 84 „Innate Immunity of the Lung: Mechanisms of Attack by Pathogens and Host Defense in Pneumonia.‟

Special Fields of Collaborative Research - Markers of Excellence

Special Fields of Collaborative Research (SFB) is to science what the Champions League is to soccer: the elite. SFBs are research networks in which scientists and scholars go beyond the borders of their respective disciplines, faculties, departments, and institutes to work together within the scope of a comprehensive and academically distinctive program. An SFB has the potential to receive millions of euros from federal and state government budgets over the course of its twelve-year maximum funding period. At the end of the first four-year period, an external Scientific Advisory Committee reviews the SFB’s findings to that point to determine whether funding will be extended for the next four-year period. The SFB is composed of a team of researchers, assembled from different institutions, to process demanding, complex, long-term research projects, while furthering the standing of the university appointed to head it.

Of the 16 SFBs in which Charité is currently involved, it heads ten by virtue of holding the “speaker’s” function. This designation means that the leadership and coordination of the entire project lies in the hands of researchers at Charité, positioning it at the forefront of medical faculties in Germany. The newly established SFB (SFB/TR 84) is organized nationally and comprises research groups from Justus Liebig University of Giessen, Philipps University of Marburg, along with Berlin collaborating partners from Robert Koch Institute and Max-Planck Institute of Molecular Genetics. Prof. Suttorp, speaker of SFB/TR 84, directs the researchers from the various participating universities and institutes in exploring new methods for the treatment of pneumonia.

Therapies Beyond Antibiotics

When Alexander Fleming discovered penicillin in 1928, it was considered a miracle cure for diseases caused by bacteria. Its discovery and the development of related antibiotics dramatically reduced the number of deaths from infectious diseases.
Many pathogens, however, have now developed resistance to existing antibiotics, eliminating their efficacy and making the search for new antibiotics a high priority.

It is important to realize that antibiotics, even if they work, are not always able to prevent death. In a study that was described in 1938 in the renowned British journal The Lancet, 50 of 100 patients suffering from pneumonia were administered an antibiotic. One in ten of the treated patients died. The other 50 patients were given no antibiotics - three out of ten did not survive the disease. „Although this research is more than 70 years old, its results are still relevant today,“ said Prof. Suttorp. „The study shows that seven out of ten patients, even though they were not treated with antibiotics, survived. This statistic emphasizes that our immune system, although not perfect, is very good, indeed. The study also indicates that antibiotics can reduce the mortality rate by 20 percent - a remarkable success.

But it also indicates that about 10 percent of the patients died, even though they received a demonstrably effective drug. It still holds true today that „a dead bacterium is still not a good bacterium;“ Prof. Support concluded. Against this background, the urgency of exploring new therapies that go beyond antibiotics is clear.

Professor Suttorp and his team begin with basic research, thoroughly investigating how the lung defends itself against inflammation, with the aim of developing new strategies for combating infection and inflammation. „To develop new therapies, it is important to know how pathogens try to evade the immune system,“ according to Prof. Suttorp.

Translational Approach
The main function of the respiratory organs - supplying the body with oxygen and removing carbon dioxide formed in metabolism - must be maintained without interruption. Therefore, it is believed that the lung’s innate defenses are very closely controlled, both spatially and temporally. Recent research has shown that, with the beginning of the inflammatory response and the limitation of inflammation and removal of the ‘battlefield,’ organ function can be restored and regulated. Together with researchers from Marburg and Giessen, Charite researchers will explore the role of the body’s immune system. „In order to develop new methods of treatment that go beyond the use of antibiotics, we must first fully understand the interaction between pathogen and host on the molecular level,“ explained Prof. Suttorp.

Since we do not know in detail how immune reactions and healing processes in the lungs work, the basic underlying molecular and cell biological research is now being conducted in 14 projects and two central projects. Through this research, the scientists will identify the locations at which the mechanisms of new drugs must act to succeed against infection and inflammation.

The SFB/TR 84 is divided into three parts, each with access to the work and findings of the other parts. Part A, „Pathogen detection in the lungs and initiating the innate immune response,“ addresses the question of how the lung’s immune system recognizes pathogens in large numbers. Part B, „Humoral and cell-based defense mechanisms,“ examines the role of local defense mechanisms of the lung’s immune system against pathogens. The objective of Part C, „Control of the host response in the pulmonary compartment, and strategies of intervention,“ is to transfer and translate knowledge gained from the basic research into innovative therapeutic approaches. The researchers in each of these efforts cooperate fully with each other.

Initial Success
The support of the German Research Foundation, in the amount of 1.1 million euros annually, started in July 2010 and is initially limited to four years. Some of the participating scientists and researchers have already worked together in previous projects. The first research findings from the new SFB are already available. Researchers discovered that the illness-causing bacteria...
block the anti-inflammatory effect of certain of the body’s hormones, threatening considerable damage to the lungs from too much inflammation. This finding is particularly significant in developing new therapeutic approaches. Treatments that complement the use of antibiotics are especially important for patients who develop pneumonia during a hospital stay because their risk of resistance to antibiotics is very high and their immune system weakened, making the illness more threatening.

EU-Funded Excellence Initiative Research at Charité

Since 2007, the European Council for Research of the European Union (European Research Council, ECR) has been promoting the support of outstanding scientists through a highly prestigious program. The most lucrative of the awarded sponsorships, the „Advanced Research Grants,” are given to scientists already established as leaders in their field. This funding goes to projects whose methods are deemed so innovative and unconventional that they offer the greatest possibility of significantly shaping science beyond their own disciplines. In 2010, two scientists at Charité were selected by the ECR from more than 500 candidates in the life sciences worldwide: Professors Klaus-Peter Hofmann and Christian Rosenmund. Each will receive 2.5 million euros for their research over the next five years.

Better Understanding of the Brain

Christian Rosenmund, professor of neurobiology in the Excellence Cluster NeuroCure, heads up the ECR-funded project to investigate the neurotransmitter glutamate and its role in transmitting signals between brain cells. Glutamate plays an important role in numerous processes of information transfer in the brain. „In order to transmit signals between cells, the upstream cell releases a transmitter, often glutamate, which is stored in small blisters, so called vesicles,” explained Prof. Rosenmund. These blisters have special transporters: vesicular glutamate transporters (VGLUT). Early in their research, Prof. Rosenmund and his team determined that these transporters, in addition to their already known function, control the release of glutamate and thereby regulate overall signal transmission. „It was an absolute surprise to us,” recalled Prof. Rosenmund of the discovery. „This observation not only contributes to the fundamental understanding of neural transmission processes, it opens up completely new possibilities for developing treatments for neurological disorders, where the glutamate-dependent signal transmission is disturbed.” At this time, the research has not yet definitively determined which diseases are affected. There is evidence, however, that faulty regulation plays a role in epilepsy, schizophrenia, and depression, among other diseases.

The challenge now is to study transporters’ control mechanisms more closely. „We hope to gain new insight into the functioning of the brain and the mechanisms underlying neurological disorders,” said Prof. Rosenmund. Early in 2011, just one year after the grant funding commenced, initial findings on how VGLUTs influence the different functions of the synapses were published in the prestigious neurobiological journal Neuron. Over the next four years, the focus of the research will be on the importance of transporters for efficient signal transmission and other regulatory mechanisms.

Prof. Rosenmund has been investigating the molecular mechanisms of information transmission in the nervous system for
the past twelve years. After working as a Heisenberg Fellow at the Max-Planck-Institute for Biophysical Chemistry and as a lecturer at the Georg-August University in Göttingen, new research findings in the United States led him to take a position as professor at Baylor College of Medicine in Houston, in the departments of molecular and human genetics and neuroscience. After six years at Baylor, he accepted the appointment to the Charité in 2009. With the financial backing of the Excellence Initiative and his “advanced grant,” Prof. Rosenmund has been able to assemble a team of highly qualified scientists and researchers at Charité. This approach — bringing together outstanding interdisciplinary scientists - is a central premise of the Berlin NeuroCure clusters of excellence, which have designated the Charité as the lead institution. Prof. Rosenmund is a member of the Board of Directors and Chairman of developmental disorders of the central nervous system (special area 665). “NeuroCure has established an ideal environment for research in Berlin: state-of-the-art facilities in which neuroscientists work very closely with clinical researchers and physicians who share their practical experiences and vice versa, enabling research findings to be translated into direct applications in the clinics.”

New Role for a Visual Pigment
Prof. Klaus-Peter Hofmann conducts research at the Institute for Medical Physics and Biophysics (IMPB), founded in 1928 by Walter Friedrich and currently housed in Berlin-Mitte (Ziegelstraße 5-9), which is among Charité’s oldest buildings. Ernst von Bergmann, one of the greatest surgeons of his time, was Director of Surgery in that very building in 1882. Today, structural research on ribosomes, along with research in the field of cellular signal transference is conducted there under the direction of Prof. Christian Spahn, Director of IMPB since 2010. Prof. Hofmann’s project focuses on intracellular signal transduction, the processes by which cells convert external stimuli and transmit this information into the cell. More specifically, G-protein coupled receptors (GPCRs), which are in the cell wall in all cells, are examined and analyzed. “These receptors serve as a receiving station for a variety of signals from the outside that affect the cell, such as hormones, fragrances, or light,” explained Project Manager Prof. Hofmann.

The scientists at IMPB have primarily the visual pigment rhodopsin in view. Rhodopsin was discovered in 1876 by the German physiologists Franz Boll and Wilhelm Kühne, and because of its red color, became known as visual purple. The pigment now has a new role. Using it as a model, the molecular mechanisms of signal transduction can be better understood. GPCRs comprising more than 800 human proteins function on much the same operating principles. In the area of drug development, the biophysical basic research being conducted at Charité has been finding direct applications. Based on current estimates, about half of all drugs influence the function of GPCRs, from simple cold medicine to strong painkillers. Now, with the results of basic research, drugs developed for influencing the GPCRs can be targeted more effectively.

A Serendipitous Research Path
Although originally a solid-state physicist, Prof. Hoffman has studied visual signal transduction for the past 35 years. A series of coincidences and interesting, chance encounters led him to the receptor rhodopsin. After completing his doctorate in Munich in the mid-1970s, Prof. Hoffman went to the Institute of Biophysics at Albert-Ludwigs-Universität Freiburg with the intention of working on biomembranes via models of solid state physics. When, by chance, he came across a preparation of photosensitive membranes from bovine eyes, the methods he applied led to a result that differed completely from previous experience. Among the interpretations he thought possible was that the signal of the rhodopsin was transferred to another, still unknown protein. „At that time, my colleagues did not take me seriously, but my interest was piqued.” Sometimes later at a conference, he met the Nobel Laureate Max Delbrück, who showed interest in Hoffmann’s approach and encouraged him to continue in his work. Over the years, his colleagues’ reservations gradually gave way, as he was invited to conferences and
found interesting collaborative partners to work with. Following a professorship in Freiburg, Prof. Hoffmann was invited to Berlin in 1992, where in addition to his work as Director of IMPB he has been teaching at Humboldt University. Since 2000, Prof. Hofmann has been a member of the National Academy of Sciences Leopoldina, president of the German Society for Biophysics, and a professional reviewer for the German Research Society. This, in turn, led to three special research areas (SFB), in which Prof. Hofmann has been involved since 1994. In 2007, Prof. Hofmann first speaker has been largely responsible for the establishment of the SFB 740 „From molecules to modules - the organization and dynamics of functional units in cells,” serving as its first speaker.

An important use to which the new funding will be used is to invest in top class scientists. In the spirit of European Scientific Research support, the research group headed by Prof. Hofmann is interdisciplinary, with contributions not only from physics and biophysics, but also from medicine, biochemistry, biotechnology, and chemistry. And the results of interdisciplinary collaboration speak for themselves: One of the most important scientific journals, Nature, has published three articles since 2008 in which Prof. Hofmann’s research was featured. The research focused on the analysis of the structure of rhodopsin, because „if you know how something looks, you can better work with it, “said Prof. Hofmann.
Cost and competition are every hospital's concern today. Yet, cost saving should not cut down on the use of the latest technology, as these often add to the increased profitability of the hospital as business unit by the optimizing features they employ in everyday routines. CHG-MERIDIAN's products range from full-scale hospital IT, complex KIS- or RIS/PACS-packages to "on-demand" models for inventory management and full-service concepts for the client sphere; CHG-MERIDIAN offers the full scope of investment in technical medical equipment from a small ultrasonic device to linear accelerators. CHG-MERIDIAN develops projects in cooperation with its customers to tailor the desired use, function and life cycle of the product to the specific needs and come up with new technology that is cost-effective and whose employment makes economic sense.

For more than 30 years, CHG-MERIDIAN has focused exclusively on IT and medical technology. A market leader in this segment with an annual investment volume of over € 600 million, CHG has understood that not only the financing of projects is at the core of any enterprise, but also a through competence in technology and consulting to execute optimized utilization concepts. In numerous projects with renowned customers ranging from medium-sized businesses, government agencies to internationally operating DAX companies, CHG-MERIDIAN proves daily that it can provide the necessary expertise. CHG-MERIDIAN also proves this in their cooperation with the Charité, a premium customer of CHG-MERIDIAN's German Computer Leasing AG from the medical industry.

With approximately 350,000 blood donations each year, the Blood Transfusion Service East of the German Red Cross (DRC) safeguards the supply for patients in Berlin, Brandenburg and Saxony. Beyond the collection, processing and testing of blood and blood components, the Blood Transfusion Service provides reference laboratories for blood group and thrombocyte diagnostics, tissue typing and the serology of infectious diseases. It also serves as an agent for bone marrow and stem cell donors and is also active in the field of autologous and allogenic stem cell collection and processing.

**Safety and Quality of Blood Products**

The DRC Blood Transfusion Service provides the highest standards of quality and safety of blood components. Of particular importance is the free and voluntary blood donation. Donor and receiver protection is of the highest priority. The DRC blood transfusion service provides 75% of the entire German supply with blood and blood components. The tight cooperation of the regional DRC Blood Transfusion Services guarantees safe supply to a high degree.

**Research and Development**

The German Red Cross blood transfusion service strives for clinical hemotherapy that fits the demand and is based on evidence; here, it cooperates closely with maximum care units of larger hospitals - notably, the transfusion medicine and clinical facilities of the Charité. Beyond the training of professionals in transfusion medicine, another main focus is the continual development of testing methods for transfusional pathogens as well as the development and preparation of advanced medicines such as stem cell and tissue medicines.
Ecclesia Gruppe

It is our business to offer creative insurance solutions for complex academic medical centers such as the Charité – in Berlin, Germany, Austria and Belgium. We are the insurance partners of 80% of all German academic medical centers and reach out into the countries named above to about 1,350 intensive care clinics, rehab institutions, medical care centers and physicians.

The trust we have built up working with our clients since 1952 is our duty. Above all, we work for the protection of the patients, the employees and the institution themselves – as true partners. It is best for all parties concerned when our work is done in the background and when insurance claims do not receive public attention.

Germany and Austria are world leaders in medical standards and patient safety. Still it is important to further discuss improvements, as long as we do not raise expectations that cannot be fulfilled. The Ecclesia Group has created the largest data bank of medical malpractice damages counting 120,000 claims and edited for research. The findings can be utilized for the health care system to improve medical prevention. The cooperation with the Charité is a most valuable support for our work.

Quality and risk management should be seen as one and a functioning crisis management plus a candid approach to possible errors create trust.

The Ecclesia group is one of the largest insurance brokers with about 1,300 employees. Our products are designed by an expertise stemming from about 140,000 insurance claims per annum, spanning from liability claims, building damages, business interruption claims and D & O cases.

Medtronic in Germany

Alleviate pain, restore health and prolong life: this guiding principle characterises the corporate philosophy of Medtronic, one of the world’s leading manufacturers of technical-medical equipment. Medtronic was founded in 1949 as a repair service for medical devices.

The company’s breakthrough came in 1957, when after a power failure the academic medical center of Minnesota was looking for alternatives for cardiac pace makers that relied on stationary electrical supply. Earl Bakken, one of the founders of Medtronic, developed a portable, battery-operated cardiac pace maker. A milestone of modern medicine.

Today, Medtronic has one of the largest portfolios of technical-medical equipment on the market. The company offers approximately 37,000 products – ranging from rhythmology and electrophysiology, to vascular intervention and cardiac surgery, diabetes, neuromodulation, spinal surgery, otolaryngology as well as surgical navigation and imaging. Every four seconds, somebody’s life is saved or substantially improved by a product or therapy from Medtronic.

Medtronic is represented in 120 countries and employs 38,000 people. The company’s headquarters are in Minneapolis/Minnesota, USA. Medtronic opened a branch office in Germany in 1970. 900 employees work for Medtronic’s German customers and patients, at the headquarters in Meerbusch, at the manufacturing plant in Deggendorf or in sales and maintenance.

Medtronic is looking for cooperations in the spirit of partnership with hospitals and medical practices. 2,500 physicians are trained annually at the training center in Meerbusch and other European training locations. This transfer of know-how contributes to the economic and medical efficiency of hospitals and medical practices. Above all, however, it helps chronically ill people in Germany.
Siemens Healthcare

The Siemens Healthcare Sector is one of the largest public health suppliers worldwide and a leader in the production of equipment for medical imaging, laboratory diagnostics, hospital information technology and hearing aids. Siemens offers solutions for the entire patient care spectrum - from prevention and early detection, to diagnosis, therapy and follow-up care. By optimizing the clinical workflow covering the most frequent diseases, Siemens helps ensure that the health care system is faster, better and at the same time cost-saving. Siemens Healthcare initiates and promotes the synergy of innovative technologies in medical practice by means of clinically oriented research and training. For example, Siemens concentrates all research at the Imaging Science Institute (ISI), optimizes diagnostic and therapeutic processes while acquiring third-party funds. Radiology, nuclear medicine, the pharmaceutical industry and others are setting new standards in diagnostics and therapy. The benefits of the ISI for lecture and product demonstration using Siemens imaging systems and IT are brought home to users and opinion leaders. Close cooperation has been established between Siemens and the Charité at the Berlin Center for Stroke Research as well in the Neurocure Project (Neurology) utilizing a number of 3Tesla-MRTs for research in the morphology and functionality of the brain. Brilliant imaging allows for representation of tissue, organs and blood vessels not only in their anatomy, but their function and metabolism as well, which is of high importance in the diagnostics of neurological diseases such as dementia and stroke in order to unlock potentials for sustainable improvement in health care.

A Strong Partner for Telecommunication in Healthcare

Safe telecommunication networks between physicians, hospitals, patients and health insurance can improve healthcare, lower the costs and make life easier for many elderly and chronically ill people. An integral component in this are new tele-medical technologies. The German Telekom has been engaged for years in the health sector. In cooperation with the Center for Cardiovascular Tele-Medicine at the Charité - Universitätsmedizin Berlin and other partners, the German Telekom introduced the project “Partnership for the Heart” in 2008. In a joint effort, a study sponsored by the Federal Ministry for Economics and Technologies with € 7 million investigating the benefits of Tele-Medicine for patients with chronic heart insufficiency was conducted. Its result was presented in 2010: in addition to standard therapies, tele-medicine could greatly improve the quality of life and even the life expectancy of high risk heart patients. SmartSenior is another joint research project of the German Telekom and the Charité, looking to help elderly citizens lead an independent life by technically assisting them in their accustomed environment at home. The research alliance develops communication means that are easy to use for the elderly, as well as emergency and assistance systems for safe locomotion and integrates medical services from prevention, care and rehabilitation. The main supporting column of SmartSenior is the Federal Ministry for Education and Research, giving € 25 million to further the success of the project.
### Overview of the 2010 Financial Year

**INCOME STATEMENT**

<table>
<thead>
<tr>
<th></th>
<th>2009 (in T€)</th>
<th>2010 (in T€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue*</td>
<td>693,762</td>
<td>722,475</td>
</tr>
<tr>
<td>Other own work capitalized</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Changes in inventory</td>
<td>-2,662</td>
<td>-695</td>
</tr>
<tr>
<td>Government grants and subsidies</td>
<td>191,153</td>
<td>179,274</td>
</tr>
<tr>
<td>Other operating income</td>
<td>280,377</td>
<td>306,134</td>
</tr>
<tr>
<td></td>
<td><strong>1,162,630</strong></td>
<td><strong>1,207,188</strong></td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>674,558</td>
<td>673,248</td>
</tr>
<tr>
<td>Cost of materials</td>
<td>321,024</td>
<td>330,168</td>
</tr>
<tr>
<td>Interim result</td>
<td>167,048</td>
<td>203,772</td>
</tr>
<tr>
<td>Result from subsidized hospital-specific items</td>
<td>92,162</td>
<td>57,767</td>
</tr>
<tr>
<td>Depreciation, amortization and write-downs</td>
<td>71,233</td>
<td>73,910</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>207,806</td>
<td>188,633</td>
</tr>
<tr>
<td>Interim result</td>
<td>-19,829</td>
<td>-1,004</td>
</tr>
<tr>
<td>Financial result</td>
<td>4,088</td>
<td>-10,630</td>
</tr>
<tr>
<td>Result from ordinary activities</td>
<td>-15,741</td>
<td>-11,634</td>
</tr>
<tr>
<td>Extraordinary expenses</td>
<td>0</td>
<td>3,075</td>
</tr>
<tr>
<td>Taxes</td>
<td>3,506</td>
<td>3,060</td>
</tr>
<tr>
<td><strong>PROFIT/LOSS OF THE YEAR</strong></td>
<td><strong>-19,247</strong></td>
<td><strong>-17,769</strong></td>
</tr>
</tbody>
</table>

* Sales revenue comprises revenue from hospital services, optional services, outpatient services and physician client fees.
Three hundred years after its foundation, the Charité – Universitätssmedizin Berlin now comprises 103 clinics and institutes spread over four campuses in Berlin with a total of 13,091 employees in patient care, research, service, administration and areas funded by third parties. As one of the largest employers in Germany’s capital city, the Charité generates annual revenue of €1.2 billion counting 136,000 inpatient and 563,000 outpatient cases per annum.

In the year under review 2010, the Charité – Universitätssmedizin Berlin generated sales revenues of €722.4 million, of which €645.4 million were generated through inpatient services and an additional €44.5 million through outpatient services as well as €32.5 million through optional services and physician client fees. The federal state of Berlin granted a total of €179.3 million in funds and subsidies for research and lecture. Other operating income amounted to €306.1 million.

Personnel expenses was the largest cost item in 2010 at €673.2 million, marking a slight decrease of €1.3 million. This item is offset by revenue of €26.8 million for staff provided to CFM. Cost of materials increased by €9.14 million to a total of €330.2 million. Other operating expenses amounted to €188.6 million, including €64.4 million for maintenance. The Charité reports a total loss of €17.8 million for 2010, which represents an improvement of €1.5 million as compared to the previous year. This improvement stems primarily from increased revenues and lower costs for staff and other operating expenses. Thus, increased costs of materials could be fully compensated in the year under review.

In the course of the 2010 financial year, the Charité invested about €78 million in tangible fixed assets and intangible assets, of which a major portion (about €33 million) was invested in pursuance of the goals of the 2010 budget. This money was financed by subsidies funded by the state of Berlin for patient care as well as research and lecture. It comprises investments in new construction and reconstruction measures which must be capitalized, large technical equipment exceeding €100,000 per item, and equipment and technical facilities worth less than €100,000 per item.

The Charité has achieved a further reduction of active full-time staff in the fiscal year 2010. On average, 9,887 active full-time staff (not counting third party funding) were employed in the course of the year 2010, of whom 9,012 were active full-time employees and 875 were full-time employees from staff allocations(CFM and others). As compared to the previous year 2009, staff could be cost-effectively reduced on average by 288 full-time employees.
## BALANCE SHEET

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A. Fixed Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Intangible fixed assets</td>
<td>4,505</td>
<td>3,463</td>
</tr>
<tr>
<td>II. Tangible fixed assets</td>
<td>1,191,676</td>
<td>1,187,060</td>
</tr>
<tr>
<td>III. Financial assets</td>
<td>1,392</td>
<td>1,532</td>
</tr>
<tr>
<td><strong>Total Fixed Assets</strong></td>
<td><strong>1,197,573</strong></td>
<td><strong>1,192,055</strong></td>
</tr>
<tr>
<td><strong>B. Current assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Inventories</td>
<td>39,604</td>
<td>41,319</td>
</tr>
<tr>
<td>II. Accounts receivable and other assets</td>
<td>221,037</td>
<td>236,030</td>
</tr>
<tr>
<td>III. Securities</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IV. Cash on hand, state central bank balances, bank balances</td>
<td>119,715</td>
<td>64,405</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td><strong>380,356</strong></td>
<td><strong>341,754</strong></td>
</tr>
<tr>
<td><strong>C. Deferred income</strong></td>
<td>3,039</td>
<td>3,154</td>
</tr>
<tr>
<td><strong>D. Loss not covered by net equity</strong></td>
<td>0</td>
<td>19,986</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>1,580,968</strong></td>
<td><strong>1,556,949</strong></td>
</tr>
</tbody>
</table>

|                  |            |            |
| **Liabilities**  |            |            |
| **A. Capital**   |            |            |
| 1. Capital      | 176,598 | 167,645 |
| 2. Revenue reserves | 0 | 1,800 |
| 3. Loss carried forward | -152,415 | -171,662 |
| 4. Net profit / net loss for the year | -19,247 | -17,769 |
| 5. Loss not covered by net equity | 0 | 19,986 |
| **Total Capital** | **4,936** | **0** |
| **B. Extraordinary item for financing fixed assets** | 990,436 | 987,282 |
| **C. Provisions** | 263,938 | 285,535 |
| **D. Liabilities** | 318,585 | 281,239 |
| **E. Deferred income** | 3,073 | 2,893 |
| **Total Liabilities** | **1,580,968** | **1,556,949** |
## GENERAL DEVELOPMENT OF BUSINESS

<table>
<thead>
<tr>
<th></th>
<th>December 2009</th>
<th>December 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of study programs</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>First-year students enrolled</td>
<td>1.349</td>
<td>1.316</td>
</tr>
<tr>
<td>of whom:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Science</td>
<td>630</td>
<td>631</td>
</tr>
<tr>
<td>Dentistry</td>
<td>67</td>
<td>66</td>
</tr>
<tr>
<td>Medical Education / Nursing Studies</td>
<td>97</td>
<td>37</td>
</tr>
<tr>
<td>Other</td>
<td>582</td>
<td>582</td>
</tr>
<tr>
<td>Total number of students</td>
<td>7.032</td>
<td>6.992</td>
</tr>
<tr>
<td>Total number of graduates</td>
<td>835</td>
<td>781</td>
</tr>
<tr>
<td>of whom:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Science</td>
<td>624</td>
<td>633</td>
</tr>
<tr>
<td>Dentistry</td>
<td>71</td>
<td>98</td>
</tr>
<tr>
<td>Medical Education / Nursing Studies</td>
<td>52</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2009 total</th>
<th>2010 total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officially authorized number of beds</td>
<td>3.213</td>
<td>3.213</td>
</tr>
<tr>
<td>Available beds</td>
<td>3.213</td>
<td>3.213</td>
</tr>
<tr>
<td>Bed utilization rate based on average number of available beds</td>
<td>84.66 %</td>
<td>83.60 %</td>
</tr>
<tr>
<td>Average occupancy in days</td>
<td>6,67</td>
<td>6,56</td>
</tr>
<tr>
<td>Occupancy days</td>
<td>941.023</td>
<td>939.256</td>
</tr>
<tr>
<td>Inpatient cases</td>
<td>133.117</td>
<td>136.490</td>
</tr>
<tr>
<td>Outpatient cases</td>
<td>573.966</td>
<td>563.433</td>
</tr>
</tbody>
</table>
### STAFF DEVELOPMENT

<table>
<thead>
<tr>
<th></th>
<th>Ø VK 2009</th>
<th>Ø VK 2010</th>
<th>Change in full time staff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time staff</strong></td>
<td>10.175,1</td>
<td>9.887,5</td>
<td>-287,6</td>
</tr>
<tr>
<td>of whom:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical service</td>
<td>2.114,1</td>
<td>2.044,5</td>
<td>-69,6</td>
</tr>
<tr>
<td>Nursing service</td>
<td>2.519,2</td>
<td>2.541,3</td>
<td>22,1</td>
</tr>
<tr>
<td>Medical technical service</td>
<td>2.788,6</td>
<td>2.634,9</td>
<td>-153,7</td>
</tr>
<tr>
<td>Ancillary services</td>
<td>1.161,2</td>
<td>1.118,0</td>
<td>-43,2</td>
</tr>
<tr>
<td>Business and supply service</td>
<td>375,7</td>
<td>360,6</td>
<td>-15,1</td>
</tr>
<tr>
<td>Technical service</td>
<td>248,1</td>
<td>230,1</td>
<td>-18,0</td>
</tr>
<tr>
<td>Administrative service</td>
<td>835,2</td>
<td>829,8</td>
<td>-5,4</td>
</tr>
<tr>
<td>Special services</td>
<td>78,0</td>
<td>75,4</td>
<td>-2,6</td>
</tr>
<tr>
<td>Staff training services</td>
<td>55,1</td>
<td>52,9</td>
<td>-2,2</td>
</tr>
<tr>
<td><strong>Inactive full–time staff</strong></td>
<td>1.096,9</td>
<td>1.149,4</td>
<td>52,5</td>
</tr>
<tr>
<td><strong>Active full–time staff (third–party funding)</strong></td>
<td>1.538,5</td>
<td>1.680,7</td>
<td>142,2</td>
</tr>
<tr>
<td><strong>Total number of employees</strong></td>
<td>12.810,6</td>
<td>12.717,6</td>
<td>-93,0</td>
</tr>
<tr>
<td>Trainees</td>
<td>294,2</td>
<td>297,8</td>
<td>3,6</td>
</tr>
<tr>
<td>Midwife trainees</td>
<td>24,7</td>
<td>21,6</td>
<td>-3,1</td>
</tr>
<tr>
<td>Apprentices</td>
<td>101,1</td>
<td>97,3</td>
<td>-3,8</td>
</tr>
</tbody>
</table>
### Overview of CharitéCenters

<table>
<thead>
<tr>
<th>Last update: July 2011</th>
<th>Position</th>
<th>Name</th>
<th>Campus</th>
<th>Phone</th>
<th>E-Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CharitéCenter for Health and Human Sciences</strong></td>
<td>Scientific Director</td>
<td>Prof. Stefan Willich</td>
<td>CCM</td>
<td>030 450-529 002</td>
<td><a href="mailto:stefan.willich@charite.de">stefan.willich@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. phil. Sabine Damm</td>
<td>CCM</td>
<td>030 450-529 181</td>
<td><a href="mailto:sabine.damm@charite.de">sabine.damm@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Basic Medicine</strong></td>
<td>Scientific Director</td>
<td>Prof. Peter-M. Klötzelt</td>
<td>CCM</td>
<td>030 450-528 071</td>
<td><a href="mailto:pm.kloezele@charite.de">pm.kloezele@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dipl.-Verw. W. Peter Kipp</td>
<td>CCM</td>
<td>030 450-528 068</td>
<td><a href="mailto:peter.kipp@charite.de">peter.kipp@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Dental, Oral and Maxillary Medicine</strong></td>
<td>Scientific Director</td>
<td>Prof. Paul-Georg Jost-Brinkmann</td>
<td>CBF</td>
<td>030 450-562 522</td>
<td><a href="mailto:paul-g.jost-brinkmann@charite.de">paul-g.jost-brinkmann@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Manfred Datta</td>
<td>CBF</td>
<td>030 450-562 002</td>
<td><a href="mailto:manfred.datta@charite.de">manfred.datta@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Therapy Research</strong></td>
<td>Scientific Director</td>
<td>Prof. Dr. Josef Köhler</td>
<td>CCM</td>
<td>030 450-524 021</td>
<td><a href="mailto:josef.koehler@charite.de">josef.koehler@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. phil. Sabine Damm</td>
<td>CCM</td>
<td>030 450-529 181</td>
<td><a href="mailto:sabine.damm@charite.de">sabine.damm@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Diagnostic and Preventive Laboratory Medicine</strong></td>
<td>Medical Director</td>
<td>Prof. Rudolf Tauber</td>
<td>CVK</td>
<td>030 450-569 001</td>
<td><a href="mailto:rudolf.tauber@charite.de">rudolf.tauber@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Virginia Schubert</td>
<td>CCM</td>
<td>030 450-669 391</td>
<td><a href="mailto:virginia.schubert@charite.de">virginia.schubert@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Head assistant MT</td>
<td>Sigrid Kersten</td>
<td>CVK</td>
<td>030 450-525 189</td>
<td><a href="mailto:sigrid.kersten@charite.de">sigrid.kersten@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Diagnostic and Interventional Radiology and Nuclear Medicine</strong></td>
<td>Medical Director</td>
<td>Prof. Bernd Hamm</td>
<td>CVK</td>
<td>030 450-527 031</td>
<td><a href="mailto:bernd.hamm@charite.de">bernd.hamm@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Virginia Schubert</td>
<td>CCM</td>
<td>030 450-669 391</td>
<td><a href="mailto:virginia.schubert@charite.de">virginia.schubert@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Anaesthesiology, Perioperative Management and Intensive Care Medicine</strong></td>
<td>Medical Director</td>
<td>Prof. Claudia Spies</td>
<td>CVK</td>
<td>030 450-551 001</td>
<td><a href="mailto:claudia.spies@charite.de">claudia.spies@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Mathias Seeling</td>
<td>CVK</td>
<td>030 450-651 121</td>
<td><a href="mailto:mathias.seeling@charite.de">mathias.seeling@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Evelyn Starkiewicz</td>
<td>CVK</td>
<td>030 450-577 048</td>
<td><a href="mailto:Evelyn.starkiewicz@charite.de">Evelyn.starkiewicz@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Surgical Medicine</strong></td>
<td>Medical Director</td>
<td>Prof. Peter Neuhaus</td>
<td>CVK</td>
<td>030 450-552 002</td>
<td><a href="mailto:peter.neuhaus@charite.de">peter.neuhaus@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Felicitas Kuntz</td>
<td>CVK</td>
<td>030 450-522 001</td>
<td><a href="mailto:felicitas.kuntz@charite.de">felicitas.kuntz@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Annett Leifert</td>
<td>CVK</td>
<td>030 450-577 081 / 677 081</td>
<td><a href="mailto:annett.leifert@charite.de">annett.leifert@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Traumatology and Reconstructive Surgery</strong></td>
<td>Medical Director</td>
<td>Prof. Norbert Haas</td>
<td>CVK</td>
<td>030 450-552 012</td>
<td><a href="mailto:norbert.haas@charite.de">norbert.haas@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dipl.-Kfm. Gerald Linczak</td>
<td>CVK</td>
<td>030 450-552 728</td>
<td><a href="mailto:gerald.linczak@charite.de">gerald.linczak@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Stafanie Bieberstein</td>
<td>CVK</td>
<td>030 450-577 051</td>
<td><a href="mailto:stafanie.bieberstein@charite.de">stafanie.bieberstein@charite.de</a></td>
</tr>
<tr>
<td><strong>Charité Comprehensive Cancer Center</strong></td>
<td>Medical Director</td>
<td>Prof. Peter Michael Schlaug</td>
<td>CCM</td>
<td>030 450-564 621</td>
<td><a href="mailto:peter-michael.schlaug@charite.de">peter-michael.schlaug@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Regina Jünger</td>
<td>CCM</td>
<td>030 450-540 091</td>
<td><a href="mailto:regina.juenger@charite.de">regina.juenger@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Cardiovascular Medicine</strong></td>
<td>Medical Director</td>
<td>Prof. Gert Baumann</td>
<td>CBF</td>
<td>030 450-513 072</td>
<td><a href="mailto:gert.baumann@charite.de">gert.baumann@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dipl.-Kfm. Gerald Linczak</td>
<td>CBF</td>
<td>030 8445-3230</td>
<td>450-552 728</td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Stefanie Bieberstein</td>
<td>CBF</td>
<td>030 8445-3231</td>
<td><a href="mailto:stefanie.bieberstein@charite.de">stefanie.bieberstein@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Internal Medicine and Dermatology</strong></td>
<td>Medical Director</td>
<td>Prof. Gerd-Rüdiger Burmester</td>
<td>CCM</td>
<td>030 450-513 061</td>
<td><a href="mailto:gerd.burmester@charite.de">gerd.burmester@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Juliane Maryam Sahlein</td>
<td>CCM</td>
<td>030 450-513 202</td>
<td><a href="mailto:juliane.maryam.sahlein@charite.de">juliane.maryam.sahlein@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Andrea Schmidt-Rumpesch</td>
<td>CCM</td>
<td>030 450-677 026</td>
<td><a href="mailto:andrea.schmidt-rumpesch@charite.de">andrea.schmidt-rumpesch@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Internal Medicine with Cardiology, Gastroenterology and Nephrology</strong></td>
<td>Medical Director</td>
<td>Prof. Martin Zeitel</td>
<td>CCM</td>
<td>030 450-513 322</td>
<td><a href="mailto:martin.zeitel@charite.de">martin.zeitel@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Werner Wyrwich</td>
<td>CCM</td>
<td>030 450-513 181 / 613 181</td>
<td><a href="mailto:werner.wyrwich@charite.de">werner.wyrwich@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Dagmar Hildbrand</td>
<td>CCM</td>
<td>030 450-577 368</td>
<td><a href="mailto:dagmar.hildbrand@charite.de">dagmar.hildbrand@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Tumor Medicine</strong></td>
<td>Medical Director</td>
<td>Prof. Bernd Dörken</td>
<td>CVK</td>
<td>030 450-553 111</td>
<td><a href="mailto:bernd.doerken@charite.de">bernd.doerken@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Felix Mehrhof</td>
<td>CCM</td>
<td>030 450-513 274</td>
<td><a href="mailto:felix.mehrho@charite.de">felix.mehrho@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Judith Heepe</td>
<td>CVK</td>
<td>030 450-577 098</td>
<td><a href="mailto:judith.heepe@charite.de">judith.heepe@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Neurology, Neurosurgery and Psychiatry</strong></td>
<td>Medical Director</td>
<td>Prof. Dr. Matthias Endres</td>
<td>CCM</td>
<td>030 450-560 101</td>
<td><a href="mailto:matthias.endres@charite.de">matthias.endres@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>PD Dr. Uwe Reuter</td>
<td>CCM</td>
<td>030 450-560 274</td>
<td><a href="mailto:uwe.reuter@charite.de">uwe.reuter@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Sascha Bischof-Everding</td>
<td>CCM</td>
<td>030 450-677 035</td>
<td><a href="mailto:sascha.bischof@charite.de">sascha.bischof@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Audiology/Phoniatrics, Ophthalmology and Otologyngology</strong></td>
<td>Medical Director</td>
<td>Prof. Manfred Gross</td>
<td>CBF</td>
<td>030 8445- 6812</td>
<td><a href="mailto:manfred.gross@charite.de">manfred.gross@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>PD Dr. Uwe Reuter</td>
<td>CCM</td>
<td>030 450-555 141 / 142</td>
<td><a href="mailto:uwe.reuter@charite.de">uwe.reuter@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Diana Jachmann</td>
<td>CBF</td>
<td>030 8445-1263</td>
<td><a href="mailto:diana.jachmann@charite.de">diana.jachmann@charite.de</a></td>
</tr>
<tr>
<td><strong>CharitéCenter for Gynecology and Pediatrics with Perinatal Medicine and Human Genetics</strong></td>
<td>Medical Director</td>
<td>Prof. Ulrike Lehmkühl</td>
<td>CVK</td>
<td>030 450-566 202</td>
<td><a href="mailto:ulrike.lehmkuhl@charite.de">ulrike.lehmkuhl@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Commercial Director</td>
<td>Dr. Helmar Wauer (komm.)</td>
<td>CVK</td>
<td>030 450-570 062</td>
<td><a href="mailto:helmar.wauer@charite.de">helmar.wauer@charite.de</a></td>
</tr>
<tr>
<td></td>
<td>Nursing Director</td>
<td>Barbara Jung</td>
<td>CVK</td>
<td>030 450-577 168</td>
<td><a href="mailto:barbara.jung@charite.de">barbara.jung@charite.de</a></td>
</tr>
</tbody>
</table>

**CBF**: Charité Campus Benjamin Franklin  
**CCM**: Charité Campus Mitte  
**CVK**: Charité Campus Virchow-Klinikum
Publisher
Business Division Corporate Communication
Charité – Universitätsmedizin Berlin
Tel. + 49 30 450-570400
presse@charite.de
www.charite.de

Responsible Editor in the Sense of the Law
Stefanie Winde, Director Corporate Communications

Editorial Department & Layout
Stefanie Winde | Christine Voigts & Jörg Neinaß

Texts
Maike Bildhauer | Claudia Peter

Photos
Charité – Universitätsmedizin Berlin