

## **Informationservice** Federal City of Bonn

## Bonn, Region of Science

Achieving more through joining forces: this is what research organisations and scientific institutions of the "ABC Region", the triangle of the cities of **A**achen, **B**onn and **C**ologne, prove in their close cooperation every day. There are few agglomeration areas in Germany featuring a comparably high concentration of education and research institutions. The ABC Region is even considered the densest concentration of research and technology organisations in all of Europe. In such good company, Bonn has since long established its reputation as an internationally recognised home of science.

Science goes hand in hand with Bonn's international outlook. A Vice Rectorate of the United Nations University (UNU) is located here. The City on the Rhine is the home base of the UNU Programme for Environment and Human Security. The UN University cooperates closely with the University of Bonn and its Center for Development Research (Zentrum für Entwicklungsforschung - ZEF). Besides the Bonn-based UN institutions and the international organisations, the University of Bonn contributes significantly to the international outlook of the "Federal City". About 3 700 out of its 29 000 students are foreign nationals. The University maintains intensive bilateral partnerships with 56 universities in five continents and is one of the most popular places in Germany for visiting scientists from other countries. There are, moreover, several thousand joint research projects with partner groups around the globe. The University is also a member of the "EUROPAEUM" Association of Leading European Universities, together with such renowned universities as Oxford and Paris-Sorbonne.

The quest for higher education was an important issue in Bonn as early as 200 years ago: first at the academy established by the Prince Elector, later at the newly founded Prussian Rhine University. Today, the Rheinische Friedrich-Wilhelms-Universität is the motor of the Science City Bonn, with tradition and modern life in peaceful coexistence: behind many historical facades thrives a modern research university of international orientation. A new generation of life scientists is being educated, for instance, at the Poppelsdorf Palace, a baroque Maison de Plaisance of the Cologne Electors. After a rigorous selection procedure, no more than 30 new students are admitted every year to the degree course of Molecular Biomedical Sciences. Their programme is characterised by top-class tuition, early involvement in research projects and intensive supervision by experienced scientists. Since 2005, moreover, the University of Bonn familiarises elite students of the American Harvard University with the area of German culture and modern life sciences in a two-months study programme.

Among the University's research priorities of international renown are Mathematics, Economic Sciences, Physics/Astronomy, Life Sciences, Genetic Medicine, Neuroscience and Philosophy/Ethics. Mention should also be made of research fields of national excellence, such as Geography and Law. With its staff of 8 800, the University of Bonn is not only one of the region's key employers, it also produces 3 000 highly qualified graduates per year.

The "Excellence Initiative" programme of the Federal and State (Länder) Governments revealed where in Germany research activities of international standard already exist. It is by no means a coincidence that the universities of the ABC Region are the most successful ones in North Rhine-Westphalia. Besides the RWTH Aachen which qualified as an "Elite University" it was the University

of Bonn that succeeded in winning the second biggest slice of the Excellence Initiative's financial cake in this federal state with its Excellence Cluster in Mathematics and two Graduate Schools in Economic Sciences and Physics/Astronomy respectively. The Graduate School in Physics/Astronomy cooperates closely with the University of Cologne.

The decision of the Bundestag, the national Parliament, to transfer Germany's capital and Government to Berlin entailed far-reaching consequences for the region of Bonn. The City and the region emerged from the ensuing profound transformation stronger than before - not least because they banked on, among others, science as a key to the future. The Berlin/Bonn Act, passed by Parliament in March 1994, gave the go-ahead for developing the Bonn region into a Centre of Science. Approximately 60 percent of the compensation fund totalling EUR 1.43 billion were earmarked for this purpose. The lion's share was invested in a newly created foundation named "caesar" - Center of Advanced European Studies and Research. Following a reorientation of its activities caesar presently conducts research in the neurosciences, using sophisticated modern methods. Caesar thus complements the neuroscience research priority of the Science Region Bonn, LIFE & BRAIN, a research platform which is equally financed by the Compensation Fund, makes its own contribution to that same effort. As a leading centre in the field of Applied Biomedicine, LIFE & BRAIN brings together the expertise of Genomic Research, Transgenic Models, Stem Cell Technology and Cognitive Brain Research. The centre includes university research groups, staff members of LIFE & BRAIN and an "incubator" for carve-out companies emerging from research operations.

The latest star in the Neuroscience research sky is the German Center for the Research of Neuro-Degenerative Diseases (Deutsches Zentrum für die Erforschung Neurogenerativer Erkrankungen – DZNE) with its headquarters on the premises of the University Clinical Center and in the immediate neighbourhood of the Neuro-Center and LIFE & BRAIN. The Federal Government will in the future provide a total of EUR 60 million a year for the core center and its "satellites". Parties to the core center are the University Clinical Center and Bonn University as well as Cologne University, Jülich Research Center (Forschungszentrum Jülich) and caesar Research Center (Forschungszentrum caesar). Under the roof of the Helmholtz Association of German Research Centers (Helmholtz-Gemeinschaft deutscher Forschungszentren) almost 400 researchers will investigate the causes and potential therapies of neuro-degenerative diseases, 300 of them alone at the main branch of the Center on Bonn's Venusberg hill.

The establishment of new universities of applied science completed the range of educational institutions in the region of the Rhine, Sieg and Ahr rivers. The Rhein-Ahr-Campus at Remagen, which is part of the Koblenz University of Applied Science, comprises the departments of "Business Administration and Social Economy" and "Mathematics and Technology". Courses range from Business Administration to Sports Management and Logistics. The University of Applied Science Bonn-Rhein-Sieg at its two locations Sankt Augustin and Rheinbach is divided in the departments of Business Administration, Computer Science, Electrical Engineering, Mechanical Engineering, Technical Journalism, Applied Natural Sciences and Social Insurance Management. By cooperating with regional business and industry as well as with other research institutes and universities it endeavours to build an effective knowledge and technology transfer which enhances the region's innovation power. One of the latest foundations in the region is the International University of Applied Science Bad Honnef-Bonn, a private, state-approved institution offering study programmes in Aviation, Hospitality, Tourism and Event Management as well as International Management. The Alanus University of Arts and Social Sciences at Alfter and a Theological Faculty at Sankt Augustin complete the wide range of learning in the Science Region Bonn.

High-tech and knowhow "Made in Bonn", have already for many years been successful export commodities of the region which is, among others, due to the research organisations residing here. Among them are the Fraunhofer Institutes at Sankt Augustin which conduct research projects in cutting-edge interest fields like robotics, bio-informatics and information and telecommunication technology. The range of scientific activities is extended by the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt - DLR) in Cologne-Porz and the Research Establishment for Applied Science (FGAN) at Wachtberg near Bonn which for 50 years has been undertaking application-oriented research in the field of defence technology. The Max-Planck-Society (Max-Planck-Gesellschaft – MPI) operates in Bonn the Max-Planck-Institutes for Mathematics, for Radio Astronomy and for the Research of Collective Goods. The caesar Foundation is an associated organisation of the MPI.

Besides the numerous education and research institutions, the Bonn region hosts a series of leading German organisations acting as mediators and sponsors in the field of science. They prepare and take decisions of crucial impact on the research sector in Germany. Many of these organisations have their premises in or around the Science Centre (Wissenschaftszentrum) in the Ahrstrasse in the Bad Godesberg district. The headquarters of the "Helmholtz Association of German Research Centres" (Helmholtz-Gemeinschaft Deutscher Forschungszentren - HGF) and of the "Gottfried Wilhelm Leibniz Society" (Gottfried-Wilhelm-Leibniz-Gesellschaft) are also located here. The adjoining Kennedyallee hosts the offices of the "German Research Foundation" (Deutsche Forschungsgemeinschaft - DFG), the self-governing organisation of German science. Close-by is the headquarters of the "German Academic Exchange Service" (Deutscher Akademischer Austauschdienst - DAAD) which is of key importance to the cooperation of the German science sector with foreign countries. The "Alexander von Humboldt Foundation" (Alexander von Humboldt Stiftung) and the German National Academic Foundation (Studienstiftung des deutschen Volkes) have their domiciles in Bad Godesberg as well.

Bonn is the home of national education institutes and federal agencies in the fields of research and science, among them the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung – BIBB), the German Institute for Adult Education (Deutsches Institut für Erwachsenenbildung – DIE) and the Federal Institute for Drugs and Medical Devices (Bundesinstitut für Arzneimittel und Medizinprodukte – BfArM). The Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung – BMBF) continues to have its principal seat in Bonn, and the umbrella organisations of the German education sector are based here as well: the Conference of University Rectors (Hochschulrektorenkonferenz – HRK), the Joint Science Conference of the Federal and State Governments (Gemeinsame Wissenschaftskonferenz – GWK) and the Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Federal States (Ständige Konferenz der Kultusminister der Länder- KMK).

03/2013