The University of Antwerp awards about 250 PhDs every year. It has 23,000 students, 17.5% of whom are from other countries. Together, its nine faculties offer 154 programmes, 29 of which are entirely English-spoken. Together, they also pool a wide range of fundamental and practice-oriented research.

“The University of Antwerp has 15 research excellence consortia (OEC), active in various scientific disciplines. They are international signposts that bring together consortia of outstanding researchers. Each OEC has a research manager who supports the consortium’s research strategy and plays a crucial role in identifying and raising funding opportunities,” says Maarten Weyn,” vice rector research and impact.

Vice rector research and impact Maarten Weyn & Vice rector valorisation and development Steven Van Passel - © University of Antwerp

Core facilities

“The core facilities are bundled per area of expertise, but for other equipment a distributed setting proved more appropriate. Although the core facilities are concentrated within certain strategic research groups, other researchers can also use their infrastructure. This fits in with our multidisciplinary approach. The next years, we will focus more than before on infrastructure. After all, this is an important criterion for attracting financing and is also beneficial for external partners. Internal needs will continue to be decisive in these investment decisions. But we will focus more on the coherence between the various investments and on long-term use. This includes immediately building in provisions for possible replacement and deploying this infrastructure for external users, so that this equipment can generate external income.”

Competitiveness

Internationally, UAntwerpen focuses on certain research areas. “For example, our EMAT team is a global leader in materials research and electron microscopy. Our expertise in infection and vaccination research within the Vaxinfectio group is also world-class. Consider, for instance, the brand-new vaccine research centre Vaccinopolis, a unique facility in continental Europe. In genetic and cancer research, environment and climate, sustainable chemistry, digital data and

communication, social and political policy, we are also very strong. In the Times Higher Education World University Rankings, we have been moving up considerably in recent years. We are now ranked 161 worldwide there. For a university of our scale and young history, that is a place we can be very satisfied with. Our international appeal is also reflected in our participation in various European Union-supported research projects by academic institutions and partners from different countries, and the increasing visibility and impact of UAntwerpen in society. Our investments in buildings and infrastructure where researchers and companies can think and work together such as BlueApp and The Beacon will further strengthen this in the future."

From fundamental research to applications

In Flanders itself, research is further underpinned by collaborations with federal and regional institutes and agencies, and increasingly with industry. As far as applications are concerned, such collaborations are mainly via the Industrial Research Fund (IOF). This way, we do not stop at continuous fundamental research, but immediately create openings to practical applications.

"The research conducted at the University of Antwerp has a strong fundamental basis. In some fields, we are among the best in the world. However, it is equally important for us to translate scientific knowledge and insights into applications of social and economic importance. Today's society has numerous challenges both at the level of ecology, health, sociology and economy," says vice rector valorisation and development Steven Van Passel.

Strengthen the practice link

"In the past, the link between research and practice was too loose," Weyn explains. "I want to strengthen that link. That is why my title of vice-rector research has been expanded to include research and impact. We will continue to support the existing centres of excellence, but at the same time we will also focus more on bottom-up free research, so that researchers have more space and variety to collaborate with internal and external partners. This will happen without any obligation to do so. In this way, they will continue to be among the top in fundamental research. Focusing purely on valorisation would detract from this, because then the aspect of knowledge acquisition could come to a standstill every time a practical result is achieved."

Free research

"Financiers such as the Flemish government and the European Union often impose certain themes through their calls, but free research is an absolute condition for creating innovations," explains Van Passel. "But a good balance between fundamental and applied is necessary to create more valorisation."

“We are not only going to stimulate collaboration with external partners, but also strengthen that between our Centres of Research Excellence. They sometimes functioned too much as islands,” says Weyn. “That is why we are strongly investing the BOF resources in research projects and in research leaders who can bring several people with them, not with identical, but with complementary spheres of interest. We prefer to embed them in groups, so that they can adopt each other’s good practices. A broader composition of these groups stimulates the exchange of visions.”

New communication culture

“This approach also entails changes in internal communication. Our employees should not only be aware of the research of their colleagues in other disciplines, they should also be proud of it. This benefits the external impact of the entire university. One of the means to do this is to organize more events were people from different areas come together to exchange ideas, knowhow and experiences,” Weyn emphasizes.

Centres of Research Excellence (2026)

ACRAI

Antwerp Center on Responsible Artificial Intelligence

AIPRIL

Antwerp Interdisciplinary Platform for Research into Inequality

CASCH

CAtalysis for Sustainable organic CHemistry

EXPOSOME 2.0

Holistic approach to assess environmental exposures and their impact on endocrine and metabolic disorders

FAMFLEX

Flexible and complex families across the life-course

GCE

Global ecosystem functioning and interactions with global change

GOVTRUST

Trust in Governance of Societal Transitions

INCIPOL

INteractions between CItizens and POLiticians

Infla-Med

Fundamental and translational research into targets for the treatment of inflammatory diseases

µNeuro

Alliance for multidimensional and multidisciplinary neuroscience

Nano-Light

Nanoparticles in the spotlight: light-driven nanoscience from lab to society

PLASMA

Plasma for environmental, medical, analytical chemistry and materials applications

TRANSGEN

From biomarkers towards personalized medicine

U-MaMi

Advancing health equity through microbiome-centric and multidisciplinary research

VAXINAID-C2P

Vaccination, infectious diseases, antimicrobials and immunotherapies: data science from cell to policy

Gold nanoparticle research and fashion

Most people wouldn't suspect there's a link between supermodel Claudia Schiffer and the powerful electron microscopes at the University of Antwerp. Yet, a recent campaign from fashion house Versace features images of gold nanoparticles, partly made in Antwerp.

The Electron Microscopy for Materials Science (EMAT) research group at the University of Antwerp specialises in studying nanomaterials down to the scale of individual atoms. "Versace came to us through the CIC BiomaGUNE laboratory in San Sebastian, Spain. We've been working together with our Spanish colleagues for many years now. They send us nanomaterials, and we then characterise the structure and composition of those materials in great detail," says professor Sara Bals.

"Gold at the macro level, as we know it, is a very stable material. But at the nano level it's a different story: the gold particles change colour, a bit like a chameleon, depending on their shape and size. It's amazing how accurately different shapes can be made. And particles that have the same shape will tend to arrange themselves, a bit like an antique mosaic."

Versace became intrigued by the changing properties of gold nanoparticles. "The fashion house developed a campaign titled 'Gold: Versace to the last atom.' The 2024-campaign emphasised the similarities between the patterns of the gold nanoparticles and those in the fashion brand's clothing and accessories. Supermodel Claudia Schiffer is one of the models showing an ensemble adorned with a 'nanoprint'."

"We love seeing our images used this way. "Obviously fashion isn't exactly our core business as scientists, but we're certainly very proud of this collaboration with the fashion world."

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