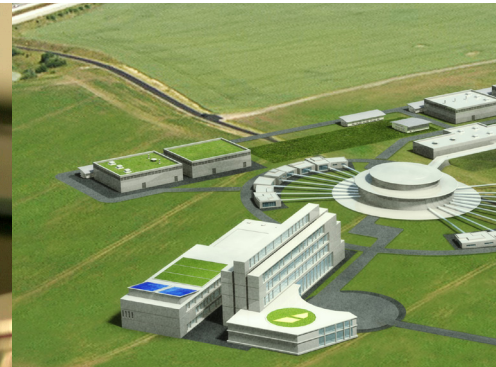




INVEST:SWEDEN

Life science initiatives for
tomorrow's innovations



A future alive with opportunities

World class companies, internationally acclaimed science, and a proud track record of investment in the innovations of tomorrow. Sweden is home to one of Europe's largest and most dynamic life science industries.

A global leader in a global market, Sweden hosts regional clusters with unrivalled expertise in their fields. Exciting opportunities abound in an environment dedicated to medical innovation, drug discovery and pharmaceutical commercialization.

At the pinnacle of achievement

Sweden's success rests on an unswerving commitment to excellence in R&D and drug discovery. Per capita spending on life science research is the highest in Europe. Swedish universities

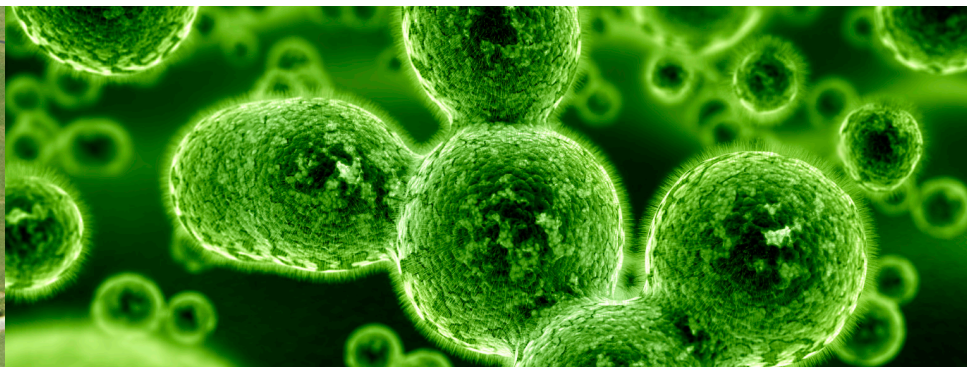
possess world class expertise in areas ranging from cancer and diabetes research to medical devices and stem cell therapies.

Specialist fields include drug discovery in infections and metabolic diseases, immunology and neuroscience, as well as advanced tools for diagnostics and bioproduction. Sweden is renowned for its high-quality clinical trials and biobanks, including the world's largest twin register.

Research and business hand in hand

A focus on proximity to patients means basic research is often integrated with clinical research, a major advantage when developing new therapies and treatments.

A unique model of close collaboration between industry, academia and clinical practitioners has fostered the growth of world leading pharmaceuticals companies like Astra, now a part of AstraZeneca, and Pharmacia, now a part of Pfizer.



Sitting alongside these two giants are more than 800 other firms – a number that is growing all the time.

Exceptional environment

Sweden has exceptional assets for modern research. Studies of how genetic and environmental factors affect health can probably be conducted more accurately than anywhere else thanks to an extensive network of national health registers and data-banks. The stem cell regulatory framework is one of the most research-friendly in the world.

Centers of regional excellence

As Swedish life sciences embrace a new era, the sector is buzzing with potential for investors and partners across multiple areas. Numerous groundbreaking projects are ongoing at regional level.

When complete, the New Karolinska Solna University Hospital will combine with a downtown knowledge center to strengthen the capital's position as a world leading life science cluster.

In southern Sweden, the European Spallation Source (ESS) is to build its major European research facility for materials research in Lund – a venture that will attract top scientists, experts and enterprises from around the globe.

Göteborg is bidding for international leadership in regenerative medicine – biomaterials and stem cells – while, in the north, Umeå is a global research leader in infectious disease treatment and sports medicine.

Welcome to Sweden – North Europe's number one life sciences region.

Excellence in healthcare and medical science

The Stockholm-Uppsala region hosts more than 600 life science companies and 300 major research projects employing over 23,000 people, making it one of the largest life science clusters in Europe. Stockholm Life is a hub for research and development, a leading life science arena with first-class research infrastructure.

Major investments are currently under way to develop Stockholm Life into a 21st century center of excellence – a vibrant knowledge cluster grouping academic institutions, life science companies, healthcare providers and international research projects.

Europe's most modern hospital

Scheduled for completion in 2016, the New Karolinska Solna University Hospital will be Europe's most modern hospital and is one of the world's largest public-private partnerships. The hospital will be a hub for national university medical education and reinforce the Stockholm-Uppsala region as a leading biomedical center. The goal is rapid knowledge transfer, resulting in higher quality healthcare for each patient.

New knowledge center leads the way

Adjacent to the hospital, Stockholm Life is building a new

district to serve as a knowledge center for life science. Within walking distance, Stockholm Life includes three universities that straddle a diverse field of knowhow and offer a strong recruitment base: Karolinska Institutet, Europe's highest ranked university in clinical medicine and pharmacology, Stockholm University, and KTH Royal Institute of Technology.

The universities are together with Uppsala University all partners in the Science for Life Laboratory, a new national resource center offering high-throughput services and research in biomedicine focused on large scale genomics and proteomics, bioinformatics and bioimaging.

Another national initiative is U-CAN, a biobank project for tumor and blood samples from different types of cancer, before, during and after therapy, to make it possible to study the effect of therapy on the tumor. This is run by Uppsala-Umeå.



SEVEN REASONS FOR STOCKHOLM/UPPSALA

- The New Karolinska Solna University Hospital. Europe's most modern hospital, due to open in 2016
- Science for Life Laboratory – a leading hub for research in molecular biosciences and medicine
- Stockholm Life – creating a new downtown knowledge center for life science in Europe
- Uppsala-Umeå Comprehensive Cancer Consortium, U-CAN
- Access to knowledge capital through biobanks and registers
- World leading research in multiple therapeutic areas: oncology, neuroscience, inflammation, metabolics and regenerative medicine
- The life science cluster, located next to one of the world's strongest ICT clusters, drives forward research and innovation in e- and m-health.



Pioneering progress in biomaterials in western Sweden

Ranked among the world's leading biomaterials hubs, Göteborg is home to cutting-edge academic research and noted industrial leaders. The city draws on a rich base of academic research and commercial healthcare innovation to drive long-term growth in biomedicine in western Sweden.



Göteborg's track record in innovative biomedical projects and research has established the city and surrounding region as a reputed center for biomaterials worldwide. Universities, research institutions and industry work closely together across multiple disciplines and fields. Substantial opportunities exist for research partners and investors.

Biomaterials and cell therapy research

The BIOMATCELL VINN Excellence Center of Biomaterials and Cell Therapy at the University of Göteborg is aiming for global leadership in the research and development of innovative medical devices based on biomaterials and cell therapy. The center combines expertise in materials science and medical devices with the latest knowhow in biological components.

SuMo Biomaterials at Chalmers University is also a VINN Excellence center, set up in 2007 as a nexus through which acade-

mia and industry work together to understand and develop the properties of soft biomaterials.

Bioentrepreneurship studies

BIOSUM is an interdisciplinary research school in biomaterials that educates and trains future leaders in advanced biomedical business development. Göteborg International Bioscience Business School, GIBBS, offers an interdisciplinary master's program in bioscience business development that trains bioentrepreneurs through the experience of real-life innovation projects.

Strong in clinical trials

The Gothia Forum is a resource center open to everyone involved in clinical research in western Sweden. It provides a centralized bank of knowledge and information about ongoing and planned clinical research, Gothia Forum also acts as a portal to all resources for collaborative research.

SEVEN REASONS FOR GÖTEBORG

- World leader in biomaterials and cell therapy
- BIOMATCELL and SuMo Biomaterials – two national centers of excellence in biomaterials
- Interdisciplinary approach to biomedical projects
- Gothia Forum – a resource centre for all clinical research in western Sweden
- Core strength in clinical trials
- Vibrant stem cell research sector
- Elaborated system for capturing entrepreneurial talent



A 21st century knowledge center

Skåne, in southernmost Sweden, is one of Europe's premier arenas for life science enterprise and research, with four universities and an array of world class research institutions. The region is at the heart of the cross-border Medicon Valley life science cluster, which employs 40,000 people in pharmaceuticals, biotech and medical technology.



• Malmö/Lund

Ready access to top international scientific expertise and a rich pipeline of new, exciting products fosters a discovery-oriented climate for life sciences that is second to none in Northern Europe.

Dynamic innovation environment

Close cooperation between hospitals, universities, public research institutions and private business supports a uniquely fertile environment for life science projects and joint ventures.

A wealth of exciting programs and initiatives drives innovation across areas like nanoscience, biomarkers in cancer medicine, regenerative stem cell therapies, and diabetes treatments.

ESS and MAX IV – the future arrives

Skåne will serve a research community of 16,000 scientists when two unique projects come on stream in the next 5-10 years.

The university city of Lund is the designated location for the forthcoming European Spallation Source (ESS), a scientific

research center being built by 17 European countries that will house the world's most powerful neutron source.

ESS will stand alongside MAX IV, a planned next-generation synchrotron light source that when complete will be the brightest laser in the world.

Together, ESS and MAX IV will form a world leading center for materials research, offering unprecedented access to research competencies for the life science and medical industries.

New life science hub in Lund

Also in Lund, an R&D site vacated by international pharma group AstraZeneca is to be converted into a dedicated life sciences hub called Ideon Medicon Village, gathering research, innovation and commercial enterprise under the same roof. Ideon Medicon Village will be adjacent to Ideon Science Park, Sweden's first science park and the largest in Scandinavia.

SEVEN REASONS FOR MALMÖ/LUND

- Highest concentration of science parks and technology transfer offices in Sweden
- Ideon Science Park – the largest in Scandinavia
- European Spallation Source, the world's most powerful neutron source, and the MAX IV Lab, the world's strongest laser, to be built in Skåne
- Leadership in gene therapy, medical implants, drug development, genomics and proteomics
- Research, innovation and enterprise under one roof at Ideon Medicon Village
- Regional specialties: nanoscience and nanotechnology, biomarkers in cancer medicine, regenerative stem cell therapy, neuroscience (Parkinson's disease) and diabetes research
- EXODIAB – one of the best and largest biobanks in diabetes research worldwide



Leadership in antibiotics, plant science and sports medicine

Umeå is a thriving hotspot for life science knowledge and innovation in northern Sweden. The sector has doubled in size in the last five years as Umeå has achieved international prominence across several fields.



The Umeå region hosts a dynamic cluster of life science companies and academic research groups. The city of 115,000 is served by one of Sweden's top universities and offers exceptionally productive conditions for biotech and pharma companies, many of which are international leaders in their fields.

Multiple spheres of excellence

More than 3,000 people work in life science business and research projects in Umeå. The region excels in areas ranging from antibiotics, plant science and medical engineering to sports medicine, metabolic and neurological disease, and diagnostics.

Trio of world leaders

Umeå's clusters are world leaders in their fields. At the Umeå Center for Microbial Research (UCMR), 200 scientists in medicine, molecular biology, chemistry and physics work together to develop a new generation of treatments for infectious diseases.

The UCMR cluster, which includes Umeå University Hospital and a business incubator facility that provides seed financing, is an ideal partner for new drug development.

Plant science expertise

The Umeå Plant Science Center spearheads the commercialization of research results in forest biotechnology. The facility is owned and operated by 46 scientists in collaboration with major Swedish wood products companies – a partnership model now being copied by universities elsewhere.

Treating sports injuries

Sports medicine is an area where Umeå has cutting edge expertise. Top athletes and recreational sportspeople from around the globe are treated at the Sports Medicine Umeå Clinic. The clinic works with Umeå University to develop pioneering therapies and rehabilitation programs for exercise-related injuries.

SEVEN REASONS FOR UMEÅ

- Northern Sweden's academic and financial center
- Umeå University – top institution with 34,000 students
- Internationally renowned clinic for sports injury treatment and rehabilitation
- Umeå Center for Microbial Research – international pioneer in antibiotic development
- University Hospital of Umeå – large medical establishment with excellent infrastructure for clinical trials
- Biotech incubator offers seed financing, business development and infrastructure for spin-outs
- Umeå Plant Science Center – hub for experimental plant biology and research commercialization





INVEST : SWEDEN

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Responsible publisher: Invest Sweden **Printing:** JustNu AB **Photos:** iStockphoto
Finalized: September 2011. Printed on environmentally approved, chlorine-free paper.

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