

Pushing the boundaries of science  
for patients, creating value for the UK



# About AstraZeneca

AstraZeneca is a global, science-led pharmaceutical company, focused on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of unmet medical need in three main therapy areas: Oncology; Cardiovascular, Renal and Metabolism (CVRM); and Respiratory and Immunology.

We invested \$5.9bn in science in 2018 and use our distinctive scientific capabilities, as well as investment in key programmes and targeted business development, to deliver a pipeline of life-changing medicines.

With a talented and diverse workforce of 64,600 employees, we are active in more than 100 countries and our innovative medicines are used by millions of patients worldwide.

**Front cover image:**  
**Biologics in respiratory disease**  
Eosinophils are white blood cells that can worsen inflammation in the lungs for people with asthma, contributing to poor asthma control and more asthma attacks. In recent years, major advances in the understanding of respiratory disease pathways have propelled us into a new era of developing medicines that deliver scientific breakthroughs to address unmet patient needs in asthma and COPD.



# AstraZeneca in the UK

## Keeping the UK globally competitive in life sciences

A FTSE 5 company, with a proud 100-year heritage in advancing UK science, today AstraZeneca is the country's largest biopharmaceutical company.

**5**  
UK locations

**£2.5bn**  
gross value add to UK economy\*

**8,300**  
UK employees

**38,400**  
jobs supported\*

### Whole life sciences value chain

With locations in Cambridge, Macclesfield, Speke, Luton and Alderley Park we invest in the whole life sciences value chain, from drug discovery and development, to advanced manufacturing, to sales & marketing of primary and specialty care medicines.

The development of our new world-class strategic R&D centre in Cambridge demonstrates our continued commitment to keeping the UK globally competitive in life sciences.



“Cambridge is one of the most exciting places in the world to be carrying out research, with more than 430 life sciences companies and organisations based in and around the city. Locating our global corporate headquarters and strategic R&D centre here puts AstraZeneca right at the heart of the UK's most thriving life science ecosystem and the largest research cluster in Europe.

“North West England is also important for us as a centre for innovation, science and advanced manufacturing. It's the place where our molecules are turned into medicines.”

**Pascal Soriot**  
Chief Executive Officer



Scientific  
discovery

**£1.3bn**

invested in R&D and the UK number one single R&D investor\*\*



Medicines  
manufacturing

**£5.1bn**

AstraZeneca UK sales – to global markets totalled £5.1bn



Bringing medicines  
to patients

**900,000**

patients treated every year\*\*\*

Partnering with the  
**NHS**

by working to improve  
treatments and outcomes

\* All data 2018

\*\* Per annum

\*\*\*Excludes vaccines

# Pushing the boundaries of science

## Investing in UK life science and developing future science leaders



“The UK has one of the strongest and most productive healthcare and life sciences industries in the world, punching well above its weight, with nearly a fifth of the world’s most-cited publications coming from UK life scientists.

“We are collaborating with some of the brightest minds across the industry on pioneering research and translating that into life-changing medicines for patients in the UK and around the world.”

**Sir Menelas Pangalos**  
Executive Vice-President,  
BioPharmaceuticals R&D

Creating a more open research environment, where scientists can work side-by-side, share their ideas freely and drive innovation is a key part of achieving scientific leadership.

Through the Life Sciences Sector Deal, we are partnering with Government and the life sciences ecosystem to drive ground-breaking research collaborations in genomics and the early diagnosis of disease.

We have brought some of the world’s strongest scientific talent to the UK, with colleagues from around 70 countries working for us here.

**291**  
academic  
collaborations

**172**  
PhDs  
sponsored

### Developing science talent

We are focussed on inspiring the next generation of scientists, working with primary and secondary school students to create excitement around science, technology, engineering and maths (STEM). We offer work placements for secondary school students and engage with local communities about our science and mentoring science businesses and entrepreneurs. We also have 118\* registered STEM Ambassadors that support our AZ STEM programme, as well as providing assistance for their own children’s schools with STEM clubs, mentoring and introductory career presentations.

We are the largest single investor in UK R&D

**£1.3bn** **19%**  
R&D spend\*\* of total UK pharmaceutical R&D spend

**3.4%**  
of total industry funded R&D



### Investing in the heart of UK life science

Our investment in a new strategic R&D Centre in Cambridge, our global corporate headquarters since 2016, builds on a 25-year heritage in the city. The power of our physical proximity to neighbours in academia, healthcare and industry creates a porous environment where ideas and talent can be shared to drive innovation.

We are delivering impactful scientific collaborations with partners across the Cambridge life science cluster. We now have more than 3,000 employees based in the area.

\* As of May 2020  
\*\* Per annum

# Putting patients first



# Pioneering new ways to address unmet medical need

We push the boundaries of science to deliver life-changing medicines for patients; partnering the life sciences community to discover and develop innovative new therapies.



## Our three main therapy areas

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### Oncology

We are pushing the boundaries of science to change the practice of medicine and transform the lives of patients living with cancer, with the aim of eliminating cancer as a cause of death. We have one of the broadest and deepest oncology pipelines in the industry, based on six scientific platforms: Immuno-Oncology, DNA Damage

Response, Antibody Drug Conjugates, Tumour Drivers and Resistance Mechanisms, Cell Therapies, and Epigenetics.

Our approach to eliminating cancer is to identify and treat patients earlier in the progress of their disease when there is potential for cure, and to improve the treatment

of relapsed or refractory patients by addressing emerging resistant populations, particularly in later stages of disease. With a focus on monotherapy and combinations, biomarker-driven innovative clinical trials and digital technologies, we are confident that cures for cancer are within our grasp.



### Cardiovascular, Renal and Metabolism

We are committed to defining new standards of care for patients with cardiovascular disease, heart failure, metabolic diseases, such as diabetes and non-alcoholic steatohepatitis (NASH), and chronic kidney disease (CKD), improving their outcomes and decreasing mortality rates.

We have built knowledge and invested in key technologies to develop both our pipeline and our level of scientific expertise. We couple this with a patient-centric approach aimed at better understanding the interplay and potential causal relationship

between these diseases, which often present in the same patient. Our approach is opening up unprecedented opportunities for novel treatment paradigms to help more patients and strengthen our pipeline with further differentiated medicines.



### Respiratory and Immunology

We are aiming to transform the treatment of respiratory diseases, with our growing portfolio of inhaled combinations at the core of care, biologics for the unmet needs of specific patient populations, and scientific advancements in

disease modification. We have revolutionised our respiratory strategy with a focus on three core themes: lung epithelium, lung immunity and lung regeneration. Increasing our understanding of disease drivers

forms the basis of our drug discovery programmes, and supports our vision to deliver disease modifying medicines that prevent, reverse or even cure these diseases.

# Supplying medicines globally

# Our manufacturing facilities in North West England deliver 1% of total UK goods exports

We employ 4,000 people in our operations in North West England, where our main sites deliver 1% of total UK goods exports.

Key sites include our Macclesfield advanced manufacturing and medicines development campus and *Fluenz* vaccine manufacturing plant at Speke, Liverpool. We are also a key tenant at the Alderley Park, Cheshire BioHub.

Between 2015-2018 we invested £220m in new manufacturing, packaging and infrastructure at Macclesfield – spend of more than £1m per week – to develop:

- > a new £120m facility to make a prostate and breast cancer treatment used by patients in more than 80 countries
- > £90m packaging and warehousing facilities
- > a £40m new packing line
- > new uses for AI in medicines development and manufacture

## £220m

invested in our Macclesfield facility 2015-2018

## Driving the UK's advanced manufacturing agenda

We are committed to ensuring the UK remains a world-class location for advanced medicines manufacturing in the long-term. We currently chair the Medicines Manufacturing Innovation Partnership, a joint Government – biopharmaceutical industry initiative which is working to develop and pilot innovative advanced medicines manufacturing technologies.

We are also a founding partner in the £56m Medicines Innovation Centre near Glasgow. This will offer companies, from start-ups through to multinational organisations, a unique service to help them to develop and adopt novel manufacturing techniques.

# Doing business the right way

# Our commitment to sustainability

We believe there is a strong connection between the health of patients, our business, our workforce and the planet. Our approach to sustainability is built around three pillars and aligned to the United Nations Sustainability Goals.

- > Access to healthcare
- > Environmental protection
- > Ethics and transparency



United Nations Sustainable Development Goals

## 70

AZ UK is home to employees from 70 countries

## 46%

of our UK workforce is female

## 13.5%

AZ UK's median hourly gender pay gap vs. 18.4% national average (ONS 2018)

## 100%

of site power from renewable sources



CDP 'A List' for both Climate Change and Water Security for 4th Year



Signed NHS pledge to eliminate single use plastics

## Access to healthcare

Access to healthcare at AstraZeneca goes beyond our medicines. We provide healthcare solutions along a journey to improve health – from prevention and awareness, diagnosis, treatment, to post-treatment. In the UK, as well as working with the NHS on enabling patient access to the latest therapies, we place a strong emphasis on the role of health in workforce wellbeing and safety, our supply chain and environmental stewardship.

## Environmental protection

As part of our approach to environmental protection, we are committed to managing our environmental impact across all our activities and our products. Industry-leading best practice is being driven in the UK in areas such as natural resource reduction, product environmental stewardship, delivering our carbon strategy, removing non-business critical single use plastics across our enterprise, and managing the risks posed by pharmaceuticals in the environment.

**RE 100** **EV 100** **EP 100**

Our employees and sites in the UK play a key role in achieving our environmental protection targets. Our goals include having zero carbon emissions from operations across the world by 2025 and ensuring our entire value chain is carbon negative by 2030, bringing forward decarbonisation plans by more than a decade. We will switch to 100% electric vehicle fleet by 2025.



"In the UK, we drive leadership across all three pillars of AZ's sustainability agenda; setting standards that are adopted by colleagues around the world, our industry and the communities in which we operate. This ranges from switching to renewable energy, to creating an open and inclusive culture which values diversity."

Juliette White  
Chair UK Leadership Team

Doing business  
the right way

Our commitment  
to sustainability



### Ethics and transparency

We aim to model an ethical business culture, going beyond legal requirements, that recognises and celebrates diversity and inclusion.

We strive to maintain a diverse UK (and global) workforce that brings different perspectives and ideas, which are key to innovation and discovery.

We want our employees to feel empowered to bring their whole self to work and have several active employee resource groups; including Network of Women, LGBTQIA+, Safe Space (Mental Health Awareness) and Early Career.

We have launched an Inclusion and Diversity Council and actively promote the advancement of women. We have also recently redesigned our employee resources, which include health and wellbeing services, an employee assistance programme and regular health screenings.

### The Young Health Programme

AstraZeneca's Young Health Programme has reached more than 4 million people in 26 countries across 6 continents with activities aimed at improving the health and wellbeing of young people. The programme focuses on the specific needs of disadvantaged young people and the prevention of the most common non-communicable diseases, including type 2 diabetes, cancer, cardiovascular and respiratory diseases, and mental and neurological health conditions. It employs a variety of approaches that reflect the specific culture, capacity and requirements of local communities, and the skills and resources of our many local and global partners.

In 2020 AstraZeneca, in partnership with Plan International UK, will launch the Young Health Programme in the UK, helping young people realise their right to good mental health and wellbeing, regardless of their gender. The programme will aim to reach 130,000 young people over the next five years.



### AstraZeneca Employee Volunteer Programme

We are passionate about volunteering and want to get as many of our employees as possible to come together to volunteer in our local communities. Every permanent member of staff has one day a year of office time allocated for volunteering. In 2019 our employees completed 150 charitable projects equating to over 14,500 volunteer hours.

# Supporting the next generation of life science expertise

## Building skills and creating opportunities through our Early Talent Programme

At AstraZeneca, we know that choosing to work in the life sciences means a career that will help improve the lives of millions of people.

### Early talent programmes

We have a portfolio of high-quality early career programmes supporting a diverse range of scientific talent. Every year, we support more than 500 young scientists – including apprentices, undergraduate and graduate placements, PhDs and post-doctoral scientists.

### Postdoctoral programme

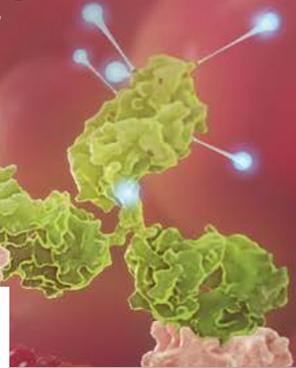
Our postdoctoral programme brings together motivated and innovative postdoctoral scientists who have a passion for ideas and a real desire to make a difference through an academic style postdoctoral position in a global pharmaceutical setting. The two to three-year programme funds postdoctoral projects originating with AstraZeneca scientists and clinicians from across our many different scientific disciplines and areas of research. These projects address fundamental scientific challenges that underpin drug discovery and development. In addition, each postdoctoral scientist receives a tailored training and development programme, encompassing key skills such as presentation delivery and publication writing.

### Graduate programme

Our graduate programme offers graduates the opportunity to complete three different placements in two years across R&D, focusing on delivering breadth and depth of experience. Graduates are supported in each placement by a line manager and by a mentor who remains with them throughout the programme, providing career counseling and guidance. As well as developing technical skills by working with world-class scientists using state-of-the-art facilities, all graduates are enrolled into our Global Graduate Development Programme, where the focus is on the softer skills that are required to make the successful transition into industry.

### Apprenticeships scheme

We are incredibly proud of our apprenticeships scheme which gives more than 100 people across the UK, with a range of qualifications, the chance to join our team and make a difference to people around the globe. Our apprentices work on everything from crucial research in drug development to the advanced manufacturing that lets us supply medicines to patients worldwide.



“I work within the Oncology team where we look at what the human body does to drug candidates. Due to COVID-19, I have been able to play my part in the pandemic response by volunteering in AstraZeneca’s COVID-19 testing lab. I really enjoy the opportunities the apprenticeship offers me to build my skills and knowledge in Science and Industry. I work with a team who are incredibly supportive, encouraging me to learn and pursue areas of scientific research. Working in the testing centre and in Oncology means that my work has real impact on patients.”

Paige Orwig  
Oncology Apprentice

\* As of May 2020

# A partner to Government and the NHS

# A responsible leader in UK life sciences

We work closely with the Government and the NHS to help plan for the future of the UK life sciences sector, and to respond to health emergencies like the COVID-19 pandemic.



## Fighting Childhood Flu in Greater Manchester together

As the provider of the national childhood flu vaccine, AstraZeneca partnered with the Greater Manchester Health and Social Care Partnership (GMHSC) to raise awareness of flu and the NHS Childhood Seasonal Flu Immunisation Programme.

We trained practice nurses and distributed surgery materials to ~300 practice teams, with our telephone team reaching 60 further practices across the region, complementing a wider engagement initiative with schools and parents to reduce myths and anxieties around the vaccination programme. The 2017-2018 flu season vaccination rate rose by 11.5%<sup>2,3</sup> in schools\* compared to the prior year.

## Partnering with the NHS

We collaborate with the NHS to ensure patients have access to cutting-edge treatments, working together on patient pathway re-design, data sharing, precision medicine and genomics.

By using precision medicine in ~90% of our clinical pipeline, we aim to tailor new and existing treatments to the needs of individual patients through the application of diagnostic tests.

## Partner to Government

We work hard with our partners in Government and across the industry to identify ways to help ensure the UK has a thriving life sciences sector. This includes making the UK a welcoming home for science, research and development and ensuring that the country has the skills it needs to lead the way in medicines manufacturing and clinical trials. Alongside Government ministers, our CEO Pascal Soriot co-chairs the UK's Life Sciences Council. We are also partners in the delivery of the Life Sciences Industrial Strategy and we work closely with the devolved administrations. For example, we have played a leading role in the Precision Medicine Innovation in Scotland Scientific Audit, alongside the Scottish Government, as well as the UK Government's Department for Business, Energy and Industrial Strategy.

<sup>1</sup> AstraZeneca, "AstraZeneca, GSK and the University of Cambridge collaborate to support UK national efforts to boost Covid-19 testing", available here: <https://www.astrazeneca.co.uk/media-press-releases/2020/astrazeneca-gsk-university-of-cambridge-collaborate-to-support-uk-national-effort-to-boost-covid-19-testing.html>

## Supporting the UK response to COVID-19

AstraZeneca has played a leading role in the nationwide effort to tackle COVID-19. We have worked closely with the University of Oxford to support accelerated development of a candidate vaccine for the virus, putting in place capacity to produce it at speed and arrangements to provide it around the world at no profit.

As a leading UK healthcare company, we have worked closely with the NHS across the UK to support efforts to tackle the COVID-19 pandemic by supporting testing efforts, providing personal protective equipment, and dedicating our research efforts towards finding the right treatment.<sup>1</sup>

We also donated 500K masks directly to the NHS and over 300 ipads and iphones to hospitals to help patients keep in touch with families.

We have also worked continually throughout the crisis to maintain our ability to supply our products to the NHS.

<sup>2</sup> Public Health England (PHE) Seasonal Influenza vaccine uptake in children of primary school age: winter season 2016 to 2017. May 2017. <https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-children-of-primary-school-age-winter-season-2016-to-2017> (accessed September 2018).

<sup>3</sup> PHE Seasonal Influenza vaccine uptake in children of primary school age: winter season 2017 to 2018. May 2018. <https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-children-of-primary-school-age-winter-2017-to-2018> (accessed September 2018).

\* Cohorts in the school programme in; 2016 / 2017 – Years 1-3 2017/2018 – Reception and Years 1-4.

# A partner to patient groups

# Helping patient charities support those most in need

Our responsibility to our patients doesn't just end with our medicines. We work closely with patient support groups and other charities, in the UK and internationally, to help meet the needs of those suffering from serious diseases.

## Supporting cancer patients

Cancer Research UK estimates that one in two people will be diagnosed with some form of cancer in their lifetime, bringing with it the immense challenge of living with and (still too rarely) beyond this devastating disease.<sup>1</sup> AstraZeneca is privileged to be able to help many patient groups who work tirelessly to make the lives of those living with cancer easier.

## Helping provide accurate information

Patient Groups provide valuable support for people when they fall ill. At AstraZeneca We work closely with these groups across our business. For example, we worked with Roy Castle Lung Cancer Foundation to help provide an 'Answering your questions' guide for newly diagnosed lung cancer patients, and with Ovarian Cancer Action to help create informative digital resources for patients.

We've also worked with groups like Diabetes UK, the British Lung Foundation, and the South Asian Health Foundation to help them provide professional development support to healthcare professionals. We are also proud to support The Patients Association to help them provide their essential support helpline.



"The life sciences sector has always been an essential part of the UK economy, and recent experience with COVID-19 shows how important it is to have world-class scientific capability on our doorstep. It's actually essential not just for our physical health but also for the health of our economy and society."

AstraZeneca is proud of our heritage and our investment footprint in the UK right the way across the value chain, from the very earliest stages of scientific discovery to the advanced manufacturing that delivers medicines to patients in the UK and around the world.

Across the UK we work with the NHS to transform care, improve outcomes for patients and advance UK clinical excellence. This is critical in ensuring that UK's life sciences ecosystem continues to thrive, can support better health, and can continue to be a major engine of economic recovery as we move beyond this pandemic"

**Tom Keith Roach**  
President, AstraZeneca UK

<sup>1</sup> CRUK, Cancer Risk Statistics, available here: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/risk>

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