

# Life-cycle of a medicine

We create financial value throughout the life-cycle of a medicine.

## Investment

We invest in the discovery, development, manufacturing and commercialisation of our pipeline of innovative prescription medicines.

## Revenue generation

We generate revenue from Product Sales of our existing medicines and new medicine launches, as well as from our collaboration activities. Our focus is on creating medicines that facilitate profitable future revenue generation, while bringing benefits to patients.

## Reinvestment

We reinvest in developing the next generation of innovative medicines and in our business to provide the platform for future sources of revenue in the face of losses of key patents.

We also assess opportunities to invest in value-enhancing additions to our portfolio.



## Research and development phases – duration: 5-15 years

1. Undertake scientific research to identify potential new medicines.
2. Preclinical studies in laboratory and animals to understand if the potential medicine is safe to introduce into humans.
3. Phase I trials with small groups of healthy human volunteers (small molecules) or patients (biologics) to understand how the potential medicine is absorbed into the body, distributed and excreted.
4. Phase II trials on small- to medium-sized groups of patients to test effectiveness and tolerability of the medicine and determine optimal dose.
5. Phase III trials in a larger group of patients to gather information about effectiveness and safety of the medicine and evaluate the overall benefit/risk profile.
6. Seek regulatory approvals for manufacturing, marketing and selling the medicine.

## Launch phase - duration 5-15 years

7. Launch new medicine while continuously monitoring, recording and analysing reported side effects.
8. Post-launch R&D to further understand the benefit/risk profile of the medicine and life-cycle management activities to understand its full potential.

## Post-exclusivity – duration: 20+ years

9. Patent expiry and generic medicine entry.

## Reinvestment of returns

### Outputs:

- > Improved health
- > Returns to shareholders

### Inputs:

- > Applying our resources to address unmet medical need

This is a high-level overview of a medicine's life-cycle and is illustrative only. It is neither intended to, nor does it, represent the life-cycle of any particular medicine or of every medicine discovered and/or developed by AstraZeneca, or the probability of success or approval of any AstraZeneca medicine.