

LifeArc representation – Spring Budget 2023

February 2023



Government has rightly identified innovation as a growth priority. Fuelling key innovation sectors will be vital to growth, not least our life science industry which generated £94.2 billion in 2021.ⁱ The UK has an exceptional science base, and global access to capital and talent to fuel the growth of life sciences companies domestically. However, these companies are mobile and are being enticed to set up in other countries, in particular since the announcement of the cut to the SME R&D tax relief system. The UK must act now to boost growth in scientific R&D, not reduce it.

SMEs play a major role in the life science ecosystem

In 2021, SME sites generated just under 10% of the life science sector's total turnover and employed 24% of the sector's staff.ⁱⁱ Their work is critical in that it is the start of the journey to develop novel medicines and therapies for patients. SMEs are the testing ground for novel innovation and require many rounds of financial investment to fund growth.

It is often only once life sciences SMEs have taken innovations through this risky early development process that they can then strike partnerships or collaborations with larger companies, or are acquired.

- Globally, in 2021 new biotech companies were responsible for 65% of the molecules in the global R&D pipeline without a larger company involved, up from less than 50% in 2016 and 34% in 2001.ⁱⁱⁱ
- One of the portfolio companies we surveyed, who is making use of use of UK R&D tax credits, was London-based RQ Bio. Last year RQ Bio signed a licensing agreement with AstraZeneca worth up to \$157m plus royalties.^{iv} In December 2022, AstraZeneca announced that the first of RQ's licensed pre-clinical monoclonal antibodies to prevent COVID-19 in vulnerable patients has entered clinical trials.^v RQ is a good example of the globally competitive advantage the UK can leverage because of its existing exceptional science base.
- The work of life science SMEs is critical to the continued development of new medicines, devices, diagnostics and technologies that can improve human health. This is vital to the overall health of our economy.

Life science SMEs are uniquely dependent on R&D tax relief

Life science SMEs undertake resource-intensive and extensive periods of 'risky' R&D. Development of new medicines, diagnostics, devices and healthtech innovations is time-consuming and costly, with a high chance of failure. **Most life sciences companies are loss-making for many years** due to the time taken to move new products through the pre-clinical and clinical development timelines and into patient trials.

The risky work of life science SMEs creates market failures – where private investment is insufficient to support early-stage R&D – and Government support becomes a material factor in enabling innovation to progress. This support is often a critical financial element of funding to the next R&D

milestone. Business plans funded by life science investors in the UK factor in the enabling role of R&D tax relief in reaching upcoming milestones. As these companies are not revenue generating, their “currency” is scientific data, and should they lose part of the funding enabling them to generate this data, they will not be able to progress their work.

All the UK-based SMEs surveyed through LifeArc Ventures were loss-making and relied on the SME R&D tax relief scheme. These companies are very concerned about the recent announced impact to the R&D Tax Credit scheme. The following are quotes from UK-based companies surveyed through LifeArc Ventures:

- “The investment required is 100% at risk because of the complexity of drug discovery and high uncertainty of success since the work is novel. The R&D tax credit scheme and in particular the SME scheme encourages entities who do not have capital security and the financial backing of a large corporate to make this risky investment by extending the R&D investment period.”
- “Life science companies have a long and expensive path to getting life-saving products to market – life science companies rely hugely on the UK’s R&D tax credit scheme...The current scheme has a hugely positive effect on cashflow, particularly in years where further funding is required. **This can often be the difference between maintaining a going concern and not.**”
- “We started in 2017 and immediately applied for advance assurance on R&D tax credits due to the work that we were undertaking which gave us 3 years confidence that our claims would be accepted and fast tracked through the system...The cash received from the R&D tax credits has been invaluable in allowing the research to progress further **due to the difficulties of raising external finance in our sector. Without it we would not have achieved the milestones we have so quickly.**”

Making the SME scheme less generous will mean less life science R&D is done in the UK and R&D progress will slow

A reduction in the available R&D tax relief for SMEs will affect inward investment at all points on the R&D pathway and impede growth in the life sciences sector. Crucially, less UK-based innovation will progress towards patients. **The UK-based companies surveyed through LifeArc Ventures estimate the cut to the SME scheme will shorten their cash runways by up to 3 months.**

- “Life science R&D has typically a 2-3 year minimum R&D investment period before clinical data is obtained which can be used to secure new funding or attract a big pharma to collaborate. It is not possible because of the nature of the science involved to easily reduce the R&D time period and therefore **the reduction in the cash runway will directly impact on the number of programmes that the company can pursue**”
- “Consideration will be given to initiating new R&D projects in light of a reduced runway and the broader economic downturn.”
- “Our claims would already be 56% lower under the changes announced in the Autumn statement”
- One said the cut would impose a “restriction on planned activities and increase the dependency on outside investment at a time when **biotech fundraising is challenging**”

- One reported needing to deprioritise spending where possible across the business, which “indirectly may impact or slow down R&D”.
- “It will have a disproportionate impact on SMEs that are developing innovative therapies and could have an impact on the development and access to medicines for rare conditions. The increasing costs for scientific advice mechanisms and medical device assessment may discourage some companies developing products for smaller patient populations from making marketing authorisation applications or device submissions in the UK.”

The cut makes the UK a less attractive environment

Life sciences is a global market. Top talent have a choice of where they would like to go to set up a new life sciences company. This choice is influenced by several factors including availability of lab space and manufacturing facilities, depth of funding available and access to skills. On conducting their work in the UK, the companies surveyed through LifeArc Ventures said:

- **“The changes obviously reduce the advantage in conducting the research within a UK setting.** This creates further challenge in a sector where talent is highly mobile, competing with other jurisdictions for quality resources at a time when other issues within the UK environment are becoming less attractive (staff mobility, staff availability, potential limitations on graduates staying in the UK market post degree etc.)”
- “Without such a generous scheme **there will be a big pull to move outside the UK** for launching Bio-Tech start up projects.”
- **“The activities required could be sourced/conducted in other jurisdictions** if incentive to keep within the UK is reduced.”

LifeArc recommends deferring the cut to seek better alternatives

This would protect the current level of life science SME investment, enable companies to continue on their planned R&D pathways in order to achieve key milestones (and therefore be able to raise additional capital) and encourage companies to stay in the UK. A deferral would also allow more time for the existing consultation on the possibility of a merged scheme. In the meantime, we support the BioIndustry Association’s (BIA) proposal to explore solutions that minimise fraud in the system without damaging legitimate life science SME investment: for example through eligibility criteria, declaring when claims are being made using advisers with contingent fees, and more.

For more information about this document, please contact Joseph Ewing, Government Affairs and Policy Manager, joseph.ewing@lifearc.org or 07824626226

ⁱ [Bioscience and health technology sector statistics 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/bioscience-and-health-technology-sector-statistics-2021)

ⁱⁱ [Bioscience and health technology sector statistics 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/bioscience-and-health-technology-sector-statistics-2021)

ⁱⁱⁱ IQVIA (2022), Emerging Biopharma’s Contribution to Innovation <https://www.iqvia.com/insights/the-iqvia-institute/reports/emerging-biopharma-contribution-to-innovation>

^{iv} [LifeArc co-founded company RQ Bio signs licensing agreement with AstraZeneca worth up to \\$157m plus royalties for monoclonal antibodies against SARS-CoV-2 - LifeArc](#)

^v [LifeArc portfolio company RQ Bio’s antibody enters clinical trials - LifeArc](#)