

# INVESTING IN THE FUTURE OF SUSTAINABLE CHEMISTRY



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Sustainability is becoming increasingly important in all areas of our life – and this is especially true in science where more and more emphasis is being placed on using greener alternatives. That is why The University of Nottingham is teaming up with pharmaceutical giant GlaxoSmithKline (GSK) to lead the way in the future development of sustainable chemistry.

The University has worked closely with GSK for many years and this innovative relationship was given a huge boost in 2012 after the announcement that the company was to donate £12m towards building a brand new facility at Nottingham – the GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry. That commitment encouraged further support from the UK Research Partnership Innovation Fund and the Wolfson Foundation.

The brand new £20m facility will transform future research and teaching in chemistry, as well as pioneering new ways of building and running laboratories which not only respect the sustainability agenda, but shape it in innovative ways.

Construction has begun at the University's award winning Jubilee Campus, and it is due to open in 2015. The laboratory will provide unrivalled facilities for chemistry with a focus on sustainability that will be reflected in the building itself, which will incorporate the latest technologies to allow it to be carbon-neutral over its lifetime.

The building will be constructed from natural materials, and the energy required to run the laboratories will be met by renewable sources such as solar power and biofuel. Excess energy created by the building will provide enough carbon credits over 25 years to pay back the carbon embedded in its construction.

Sustainable chemistry is a vitally important area for the future and this commitment from GSK is a remarkable vote of confidence in both the University and the School of Chemistry.

The laboratories will focus on research that is of particular relevance to the pharmaceutical industry and which complements established

expertise at the University. It will also deliver advanced undergraduate teaching and outreach to the wider scientific community to embed sustainable chemistry principles in the next generation of scientists.

As a centre of excellence, it will catalyse new collaborations with other institutions and industry partners and will bring together leading UK academics, postgraduate and postdoctoral researchers, and GSK chemists in developing expertise in sustainable chemical synthesis.

The Engineering and Physical Sciences Research Council (EPSRC) and GlaxoSmithKline are jointly contributing to the funding for new Chairs of Sustainable Chemistry, to be based at the GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry.

The new Chairs will be responsible for developing and sharing best practice in green chemistry and catalysing new collaborations with other partners. Their role will be pivotal in attracting top UK academics, postgraduate and postdoctoral

researchers to Nottingham. The first Chair is already in post and two others will join the Centre over the next year.

In addition to the new centre at Nottingham's Jubilee Campus, GSK employs more chemistry graduates from Nottingham than any other university in the UK, and fourth-year students have the opportunity to work on GSK projects as part of their programme.

GSK has also collaborated with the University as part of a new module – the first of its kind in the UK – introducing chemistry students to the medicinal chemistry skills the pharmaceutical industry requires, while also enhancing knowledge transfer between industry and academia.

These developments are helping to establish Nottingham as a pioneer and centre of excellence in sustainable chemistry.

More information about the GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry can be found via <http://www.nottingham.ac.uk/estates/developments/csc.aspx>.



Artist's impression of the GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry due to open in 2015.