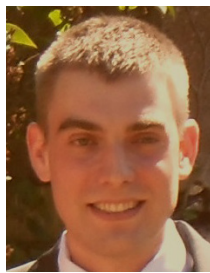
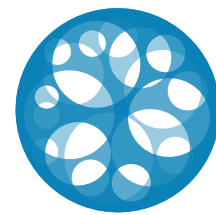


CASE STUDIES



Edward Beaumont, Senior Scientist at Evotec



What did you study at university?

I did my undergraduate degree in Biochemistry as I was particularly interested in understanding the biological process at a molecular level. I studied different topics and particularly enjoyed the structural biology and enzymology modules. The lab where I carried out my final project developed a physics approach to understand cellular mechanisms. It was a really rewarding experience to work within a multidisciplinary team including physicists and biologists.

What did you do after university?

I enjoyed my final year project so much I decided to continue and carried out a Master's and a PhD. My PhD combined enzymology and biophysics and it involved collaborating with chemists to progress the project. After my PhD, I had the opportunity to work for a biotechnology company where I produced and characterized protein drugs aimed at developing vaccines. I later went back into academia to complete postdoctoral training to gain experience in protein crystallography, which I now use in my current role.

What are the main duties of your role?

My current role involves supporting the medicinal chemistry department's efforts in finding new drugs. My role is to gain molecular insights into how the drug binds to a specific protein target by performing protein crystallography experiments. I also produce protein reagents for assays or for biophysics studies.

Who do you work with as part of your job?

I work with medicinal chemists, assay biologists, pharmacologists and clients, who I report our findings to.

What skills are needed, other than scientific knowledge, to do the job?

Project management skills become important when you have to deal with competing interests such as examining the binding properties of compounds from the chemists, delivering protein reagents to support other activities, and responding to client needs. When you work with scientists from different backgrounds, as well as clients, it is also essential to communicate adequately with people at different levels of understanding.

What are your favourite aspects of the job?

Every project brings its own challenge to solve and it allows you to learn a lot from the talented colleagues you work with. I am always delighted when, as part of a team, a solution or a drug candidate is found so the project can move forward to the next step.

What aspects of the job do you enjoy least?

A project can change directions quickly or be dropped for all sorts of reasons.

What is biochemistry?

Biochemistry is the branch of science that explores the chemical processes that take place inside all living things, from bacteria to plants and animals. It is a laboratory-based science that brings together biology and chemistry, by using chemical knowledge and techniques to help understand and solve biological problems.

Structural biology: studying the structure and function of large molecules, such as proteins and DNA.

Enzymology: the study of enzymes, which are the proteins responsible for biological reactions.

Protein crystallography: helps to study protein structures and interactions with other substances.

Biophysics: applying theories and techniques from physics to biological systems.

Further information

Career ideas (Prospects):

www.prospects.ac.uk/options_biology.htm

Biochemistry careers information:

www.biochemistry.org/Education/Highereducation.aspx

General science careers information:

www.futuremorph.org/

For more information visit www.biochemistry.org