



# *Welcome to Covance*

# *Contract Research Organisation*



*Helping to bring miracles to market sooner.*

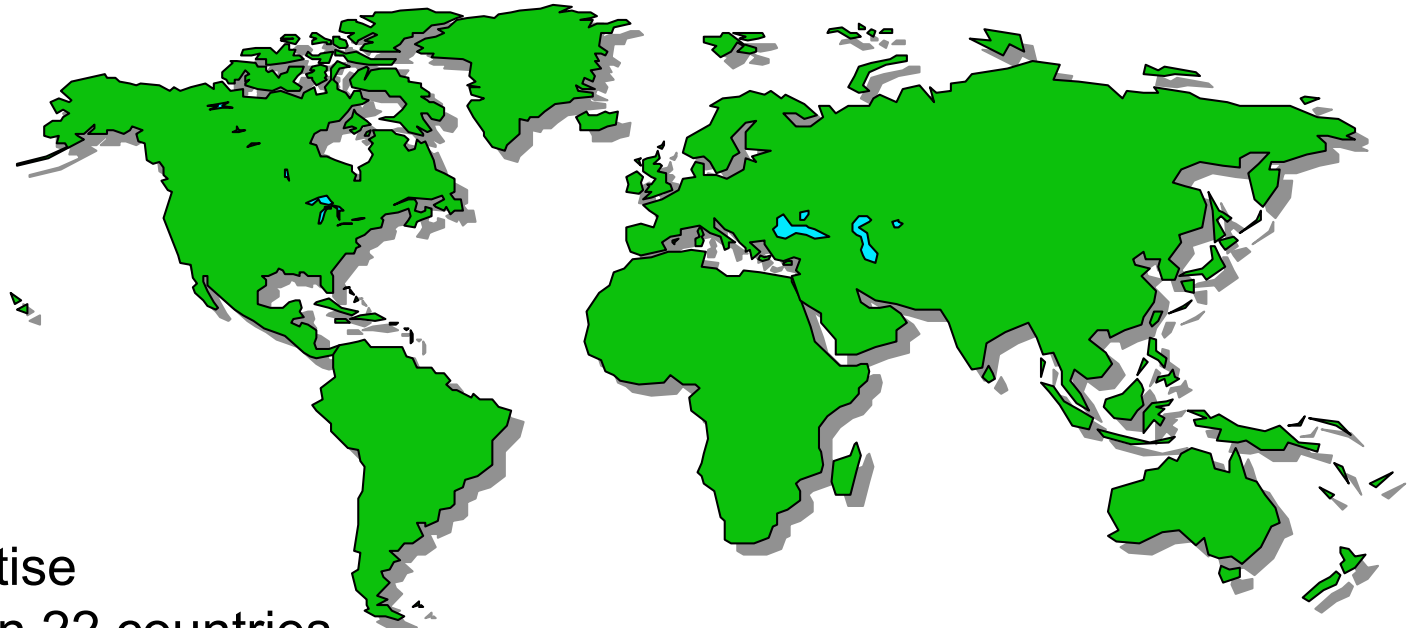


# ***Introductions***

- Louise
  - Introduction to Covance
  
- Christine
  - Line managers perspective



## Global Presence...



- Global Expertise
- 33 locations in 22 countries
- \$1.5 billion in '06 net revenues and approximately 8,500 employees
- Financial stability and resources of a market leader
- UK presence - Harrogate - Leeds – Maidenhead - Crawley



# Covance

- Covance is a Contract Research Organisation (CRO) working in the Life Sciences area, principally servicing the following industries;
  - Pharmaceutical
  - Medical device
  - Agrochemical
  - Chemical
- Headquarters in Princeton, New Jersey, we are one of the world's largest and most comprehensive drug development services companies.
- The majority of our laboratory based roles are based at our Harrogate site in North Yorkshire. We also have Data & Clinical roles based in Leeds, West Yorkshire.



# Department Overview

## Departments that recruit Graduates and Student Placements

- Metabolism
- Environmental Sciences
- Bioanalysis
- Pharmaceutical Analysis
- Central Dispensary
- Genetic and Molecular Toxicology

## Departments that recruit Graduates

- Biotechnology
- CPS (Clinical Pathology Services)
- Histology
- Necropsy
- Quality Assurance



# Metabolism

- *In vitro* and *in vivo* ADME
- Drug Discovery screening service to support lead optimisation and candidate selection

## Opportunities

- We have opportunities for Research Associates' to work in our In Vitro Metabolism group. The main function of this role will be to supervise the day to day execution of studies to investigate the metabolic fate of NCE's and biotechnology products in *in vitro* systems, as part of the drug development process. Duties will include preparation of hepatocytes and microsomes, maintenance of cell cultures and conduct of Cytochrome P450 assays using a range of techniques e.g. HPLC, LC/MS, fluorescence and spectroscopy.
- Professional requirements: BSc/MSc or equivalent in Biochemistry/Pharmacology or a related subject.



# ***Environmental Sciences***

- Physical chemistry
- Environmental Fate - Soil, water, air
- Plant metabolism - Glasshouse / outdoor
- Ecotoxicology - Aquatic, terrestrial, biodegradation
- Residue chemistry - Methods & sample analysis
- Field trials - Crop residues, soil / water residues
- Regulatory Affairs

## **Opportunities**

The main duties of this role will be the set up and day to day supervision of studies designed to determine the behaviour of test compounds in the soil, sediment and water environmental compartments and analysis of soil/sediment samples for physicochemical properties. Opportunities will also be available to participate in Ecotoxicology testing on aquatic and terrestrial organisms and Biodegradation studies investigating the breakdown of compounds in waste water systems.





# ***Bioanalysis***

## **Bioanalysis**

The work performed in the department is the quantification of drug concentrations in biological samples – usually plasma or urine, but occasionally others such as whole blood and serum.

Work carried out in the department is based upon liquid chromatography-mass spectrometry and supports all stages of drug development for the pharmaceutical industry from pre-clinical through clinical Phases I to IV.

## **Opportunities**

We have opportunities for Experimental Officers in the Bioanalytical Services Department to be responsible for the day to day conduct of the analytical studies. They will conduct the assay validation, the chromatographic analysis of bioanalytical samples and the processing of data. Experimental Officers work closely with Study Directors and Method Developers to ensure that studies are performed in accordance with best regulatory and scientific practice, and in a timely and cost effective manner.





# Pharmaceutical Analysis

Pharmaceutical analysis provide data to meet efficacy, safety and regulatory compliance specifications. Our pharmaceutical analysis capabilities extended to all phases of drug development.

## Opportunities

Analysts are responsible for carrying out the bulk of the analytical testing in PAD and are based in the analytical team.

Typically either a non-graduate with at least 4 years experience of analysis in the pharmaceutical industry or a recent chemistry graduate. Analysts will have good practical skills and an understanding of the analytical techniques they carry out.



## Central Dispensary

Central Dispensary offers a range of diverse and complex formulations and analysis procedures.

We offer a comprehensive 6-month Training Programme which will cover pre-clinical formulations analysis and preparation.

This will include chemical analysis using HPLC techniques in a GLP compliant laboratory, method development and formulating dietary, liquid and I.V. preparations

### **Professional requirements:**

Preferably BSc in Chemistry or a related discipline.



## **Genetic and Molecular Toxicology**

The Genetic Toxicology department assesses the effects of test articles on DNA. The assays are usually performed very early on in the drug development process. Screening and regulatory studies are performed as well as many different assays.

There are opportunities for science graduates in the labs as well as office based roles for non graduates.



# Biotechnology

## Biosafety

Ensure the safety and potency of biopharmaceuticals and their biological production systems throughout the manufacturing process

## Protein chemistry

Analytical testing to ensure consistency of manufacture of biopharmaceuticals and monitor their stability.

## Immunochemistry

Measure blood concentration of biopharmaceuticals in animals and humans over time.  
Measure immune response to these drugs.

Experimental Officers are laboratory based analysts who are responsible for performing a wide variety of assays within a regulatory compliant laboratory (GLP/GMP). Due to the varied nature of the scientific work involved, candidates must be able to demonstrate a flexible approach to laboratory work, possess excellent communication and time management skills and be able to maintain a high standard of record keeping. There are excellent promotion prospects and positions are available at all levels depending on qualifications and experience.



## ***CPS ( Clinical Pathology Services )***

CPS provides routine and non-routine clinical pathology testing to internal and external customers which consists of Haematology, Immunology and clinical chemistry. Clinical Pathology fits into all aspects of drug development from safety testing in clinical trials to in-vitro testing and to pre clinical trial testing. The laboratory analysis, equipment, training and qualifications are very similar to those in pathology departments in the NHS for medical diagnostic work.



# Histology

- Histology is a branch of biology that involves the study of anatomy and cellular organisation of cells and tissues, through the creation of microscope slides. The Histology department accommodates requests to perform general toxicology screening of tissues from various species through Pre-Clinical Histology.
- We offer a comprehensive six-month training programme, which will provide a broad introduction to the basic concepts of pre-clinical histology. Functions will include tissue selection, tissue processing, paraffin wax embedding, microtomy, basic staining and collation. When fully trained, the Laboratory Scientist will use their knowledge of anatomy and biological sciences, to become involved in specialist sample procedures.
- The Histology department also performs specialist pre-clinical work incorporating techniques such as electron microscopy processing, empirical staining, image analysis and histomorphometry. Clinical Histology is another facet of the department that specialise in Immunohistochemistry techniques, Crytomy and Tissue Reactivity studies.
- Professional requirements.  
Preferably BSc in Biomedical/Biological sciences.



## *Necropsy*

- Our necropsy department provides a site wide necropsy service covering a full range of specialised dissection and tissue sampling procedures for laboratory bred animals and domestic livestock.
- We offer a comprehensive training programme which covers animal tissue dissection, preservation and data recording on the full range of species used at Covance. During this phase initial exposure to animal handling techniques will be learned as a pre-requisite for future personal Home Office Licence Training Courses on animal handling and post-mortem procedures.
- Professional requirements.  
Preferably BSc in Biological/Medical/Animal Science.





## ***Quality Assurance***

Quality Assurance ensure that studies are performed in accordance with Good Laboratory Practice regulations (GLP) and company standards. They audit study documentation, procedures, reports and raw data and provide regulatory advice and support to the Operational staff. QA also audit facilities site wide which involves auditing company's suppliers and subcontract facilities.

The department offers a comprehensive training package and a defined career progression structure, and offers the chance to experience a wide cross-section of scientific disciplines across the whole drug development spectrum.



## *How to apply?*

- All applications should be made through our website

[www.covancecareers.com](http://www.covancecareers.com)



## *Line Manager's Perspective*

- My role at Covance
- The following slides are responses from our departmental managers and supervisors regarding some questions asked about placements...



## ***1) Is there anything that you feel is particularly good or bad about student placements at present?***

- Many industrial placement students have rejoined the department after graduation.
- Students may have high expectations of what their role will be (unfortunately due to the time limitations and GLP, their role may be repetitive).
- The system of taking on a student for one year has the advantage of giving the opportunity to trial a future employee for one year (possibility of the offer of a full time position after graduation).
- As a company provides an excellent chance to promote Covance as a graduate employer and for the university to promote themselves.



## ***2) Do you find that students don't have the correct attitude to working?***

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- Attitude to work really is down to the individual
- The majority of placement students we have had within the department have shown an excellent attitude towards work
- The majority have worked extremely hard, gaining the same levels of competence as a permanent member of staff would gain with their first year



### ***3) Are students missing certain skills whether laboratory skills or generic skills and you wish universities would tutor students in these before they arrived?***

- The laboratory experience that the students come into industry with varies across universities. The main area that students may tend to lack knowledge and skills in is the understanding of the importance of Good Laboratory Practice
- Some students struggle with basic laboratory skills e.g. simple calculations, correct use of pipettes. Some lack basic maths skills e.g. working out percentages. We try to deselect these at interview
- Generally able to train staff quickly (full training will be given anyway in even the most simple tasks in order to maintain GLP)



#### **4) Do you find that contact with some universities is better than others - perhaps in the way that they monitor their students?**

- Relationships with University staff is generally good
- A frequent complaint from sandwich students is that they are required to pay half fees for the year and the only University support they get is assessment of their project and one tutor visit (which is generally received very late in the placement)
- Universities vary widely in their assessment of students on placement (i.e. projects, company overviews etc.)
- Some students have to be pushed to do their projects and are generally not written before they leave. Occasionally report is difficult to obtain to check for confidentiality etc.





## 5) Do you have any suggestions that would enhance how student placements work?

- Generally student placements work well
- If the Universities could work together to ensure that the expectations of both the students and the company are a little more standardised across the different universities (i.e. applying and interviews vary greatly).



# Questions

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