



## **Position Description – Polymer Development Scientist**

**Date: 09 October 2020**

## **Reporting**

Head, Polymer Materials

## **Term**

Full-time

## **The Company**

**PolyActiva Pty Ltd** is a Melbourne-based biotechnology company developing pharmaceutical products derived from a novel drug-polymer conjugate technology, including ocular implants to treat glaucoma or endophthalmitis.

## **Location**

Monash Institute of Pharmaceutical Sciences, Parkville or such other PolyActiva Melbourne based laboratory or facility.

## **The Role**

The key responsibilities for this position are to work as a polymer chemist/development scientist/engineer with minimal day to day supervision and to deliver agreed development outcomes. This will include experiment design, the conduct of experimental studies, and data analysis. Specifically, the successful applicant will be responsible for the laboratory scale manufacture and study of pharmaceutical products derived from PolyActiva's drug-polymer conjugate technology, as well as assessing the performance characteristics of such products and polymer systems, including characterisation of the drug-polymer conjugate, performance of the pharmaceutical products derived from the polymer conjugate and degradation of the polymers.

## **Key Result Areas/Duties**

- Contribute to the development and production of novel monomers and drug-polymer conjugates.
- Contribute to the development and production of novel pharmaceutical products based on the company's drug-polymer conjugates, specifically ocular implants.
- Perform polymer synthesis using different step-growth techniques (polyurethane synthesis, click chemistry).
- Purification of polymers, including conventional methods for the removal of reactants, catalysts and residual solvents.
- Develop processes for the manufacture of pharmaceutical products from the drug-polymer conjugate API.
- Perform analysis to characterise drug-polymer conjugates, including use of GPC, NMR, MALDI-TOF, FTIR and DSC.
- Conduct both shelf-life and "in-use" stability evaluations of drugs and drug-polymer conjugates.
- Prepare specifications for monomers, drug-polymer conjugate material and ocular implant products, including design of experiments to determine appropriate specification limits.
- Contribute to the effective functioning of PolyActiva's research team and help deliver PolyActiva's organisational objectives.
- Write scientific reports, SOP's, Master Batch Record's, research reports and peer-reviewed journal articles.

## **Pre-Requisite**

Tertiary qualifications in polymer chemistry or chemical engineering, preferably MSc. Or PhD qualified.

## **Key Selection Criteria**

### *Essential*

1. Demonstrated knowledge of polymer chemistry and proven capability to synthesise bespoke polymers.

2. Experience with polymer analytical and material test methods including mechanical, and thermal properties (such as MALDI TOF, GPC, DSC, viscometry, etc.).
3. Excellent written and verbal communication skills.
4. Demonstrated ability to work independently as part of a multidisciplinary research team.

*Desirable*

5. Experience with polymer processing (e.g. casting, extrusion, mould injection, etc.).
6. Experience with CMC of a pharmaceutical product.

**How to apply**

To pursue this exciting opportunity, please click 'Apply Now' and follow the application process. You will need to provide a resume and your responses to the key selection criteria.