POSITION DESCRIPTION

Position Title:	Synthetic - Organic Chemist
Position Reference Number:	ECRLD007b
Division	Land Division
Position Classification:	S&T3-4 (APS4/5-6)
Position Location:	DST Fishermans Bend , Melbourne Victoria
Security Level:	NV1
Enquiries:	Dr Shannon Zanatta, Shannon.zanatta@dst.defence.gov.au Ph 039626 8476

Academic Disciplines

Aerospace/ Aeronautical Engineering, Naval Architecture	Chemical, Radiological, Biological, Food sciences	Materials Science
Computer Sciences, IT, Software Engineering, Telecommunications	Mathematics and physics	Psychology and Social Sciences
Mechanical and Mechatronic Engineering (including robotics)	Electronic/ Electrical Engineering	Other

Position Overview

The Agent Chemistry and Verification Science and Technology Capability (STC) in Land Division, undertakes specialist applied research activities in direct support of current and future military operations and National Security. The STC areas of interest include the characterisation and assessment of threat agents and materials, chemical analysis and verification of their alleged use, and production method attribution. To achieve this, the STC utilises a wide range of advanced chemical and physical techniques including chemical synthesis, GC-MS, LC-MS, TGA-DSC and multinuclear NMR. The STC also operates the NATA accredited Chemical Agent Analysis Facility (CAAF) and Australia's only Schedule 1 laboratory for the synthesis of chemical warfare agents for protective purposes under the provisions of the Chemical Weapons Convention (CWC).

We are seeking a synthetic organic chemist to join a team examining the chemical and physical properties of hazard and threat materials of interest to Defence and National Security. The successful candidate will design and conduct experiments to establish multidisciplinary research projects on assessing the hazard posed by a range of highly toxic chemicals. In addition, support a program to attribute chemicals of concern to production methods and source materials. The successful candidate will also contribute to synthesis of highly toxic chemicals, including toxic industrial chemicals, chemical warfare agents, novel threat agents, and relevant chemical precursors and degradation products, for verification of alleged use and other protective purposes.

Position Duties

- Conduct research related to assessing the potential hazards associated with a range of highly toxic chemicals, including their attribution to source material, production method or other relevant information.
- Assist in the ongoing operation of the Protective Purposes laboratory, including developing procedures, quality assurance and ensuring safety
- Adhere to and fully support the laboratory's NATA accreditation
- Considerable experience and understanding of research methods in:
- Synthetic and reaction chemistry of pharmaceutical and/or organophosphorus compounds
- Purification and spectroscopic characterisation of reaction products (e.g. NMR)
- Real-time reaction monitoring
- Demonstrated ability to work safely with highly toxic chemicals in a laboratory
- Understanding of the use of gas chromatography (GC-MS) and/or liquid chromatography mass spectrometry (LC-MS) and related sample preparation procedures (e.g. liquid extractions and derivatisations) would be highly desirable

Other Requirements

Bachelor degree in Chemistry with Honours with experience working a chemistry laboratory, or Ph.D in Chemistry or related science discipline.

A Baseline Security Clearance on appointment with the ability to obtain a NV1 Security Clearance for the position