



POSITION DESCRIPTION

Position Title:	Principal Radiochemist (Radiopharmaceuticals Manager)
Cluster / Business Unit / Division	Nuclear Science & Technology
Section or Unit:	Biosciences / Radiochemistry
Classification:	Band 8
Job Family:	Research
Position Description Number:	PD-2347
Work Contract Type:	Science / Research
STEMM/NON-STEMM:	STEMM

POSITION PURPOSE

The primary objective of the Principal Radiochemist (Radiopharmaceuticals Manager) is to support the research and development of ANSTO's research radiopharmaceuticals and radiolabelling technologies, primarily using reactor produced radioisotopes. The position manages and leads the development and optimisation work to enable new and improved radiopharmaceuticals for research applications. The position holder manages radiochemistry manufacturing capabilities to support the translation of radiopharmaceutical technologies into high-quality products. The position supports users, collaborators and partners across NST, ANSTO Nuclear Businesses, the nuclear medicine community, universities and industry, and builds productive national and international networks.

ORGANISATIONAL ENVIRONMENT

ANSTO leverages great science to deliver big outcomes. We partner with scientists and engineers and apply new technologies to provide real-world benefits. Our work improves human health, saves lives, builds our industries, and protects the environment. ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year.

Nuclear Science & Technology (NST) incorporates ANSTO's research, innovation, landmark research infrastructure and associated platforms and capabilities. NST conducts research and development in relation to nuclear science and technology and connects people, transfers knowledge, and provides nuclear-based products and services for the benefit of Australia.

The Research Infrastructure portfolio consists of platforms established on scientific infrastructure and capabilities, with a number of the platforms categorised as landmark infrastructure. This includes a range of scientific assets, infrastructure, capability development and delivery for multi-decadal, multi-disciplinary, multi-user platforms for a collaborative user community and for internal research and development endeavours.

Biosciences is a Research Infrastructure platform which includes facilities and capabilities organised into three groups – Radiochemistry, Irradiations, and Biology & Preclinical Imaging. The platform partners with pharmaceutical, biomedical and medical devices companies to bring new products and methods to market. It collaborates with the NST Human Health research theme to develop greater understanding of disease states, diagnosis and treatment, assists in optimising ANSTO Nuclear Business production methods and develops new and improved methods of deploying landmark infrastructure and nuclear methods for the benefit of partners, collaborators and customers.

Radiochemistry group provides a wide range of capabilities to enable the radiochemistry research and development team to deliver radiopharmaceuticals, radioisotopes, advanced manufacturing methods and radioisotope separations. The Radiopharmaceuticals team is focused on the development and the manufacture of new radiopharmaceuticals, working on discovery research through to product development

and radiopharmaceutical provision to support preclinical and clinical evaluation. The team develops new radiochemistry technologies/techniques, applies established radiochemistry technologies to new targets, and optimises the production and formulation of radiopharmaceutical products to deliver world class outcomes. Including manufacturing processes and methodologies to optimise the production of radiopharmaceuticals and radioisotopes. Using automated radiosynthesis modules following GMP and GLP principles, to provide radiopharmaceuticals and radioisotopes manufacture procedures, technologies, and products at production scale. They achieve this by leveraging extensive radiochemistry capabilities for manual and automated radiosynthesis, accessing a broad range of reactor radioisotopes and radiolabelling techniques. The team delivers high value by working with closely allied groups in the Radioisotopes team, Nuclear Medicine Development team, and the Preclinical Imaging and Biology team. The radiopharmaceuticals team collaborates with partners from the academia, (radio)pharmaceutical industry, and hospitals.

ACCOUNTABILITIES & RESPONSIBILITIES

Key Accountabilities

- Provide scientific leadership and specialist expertise to ensure the effective development and deployment of radiochemistry capabilities for the development of preclinical and clinical radiopharmaceuticals. This includes the development of novel radiopharmaceuticals, radiolabelling, radio-automation and radioanalytical measurement methods to support ANSTO's advanced manufacture and radiopharmaceutical research programs.
- Lead and manage routine radiopharmaceutical production and propose, evaluate, validate, and execute new and improved manufacture methods for routine supply of radiopharmaceuticals and radioisotopes to user communities.
- Lead and support the creation, development and execution of early-stage radiopharmaceutical and radiolabelling technologies. To support and develop radiochemistry capabilities, ANSTO business and external commercial and academic partners.
- Responsible for nuclear medicine community engagement to secure commercial revenue and grant funding opportunities, support ANSTO on-going manufacture and internal opportunities and develop collaborative relationships aligned within business plans, NST and ANSTO objectives.
- Manage the Radiopharmaceuticals team through appropriate staff, resource and project management in a manner that reflects and achieves the present and future directions of ANSTO, including responsibility for setting objectives, managing performance, and conducting performance assessment and career development.
- Manage the Radiopharmaceuticals laboratories and equipment through an asset management framework and assist with the capital development program to ensure the availability and utilisation of capabilities, meeting operational safety, security, sustainability and compliance requirements within applicable standards, legislation, and regulations.
- Development and maintenance of quality, safety, and compliance programs. Write SRA, SWMES, work instructions and procedures for equipment usage and for safe experimental practice, validation records and protocols. Ensure equipment is used properly, safely and in accordance with ANSTO policies and procedures.
- Develop and maintain extensive national and international networks to represent ANSTO and identify and secure collaborative research opportunities with strategic partners including international government radiochemical research and manufacturing laboratories, universities, and industry.
- Lead the preparation of scientific reports, publish papers, reports, patents, and abstracts, presenting results in national and international forums.
- Undertake additional duties as required and during period of leave of other staff.

Decision Making

- The ANSTO values, organisational corporate plan, integrated business planning process, the NST strategic plan and the Biosciences business plan provide the context for the position.
- Determine key work priorities and methods for the Radiopharmaceutical Development team within the context of agreed work plans and in consultation with the Manager, Radiochemistry and other radiochemistry capability managers.
- The position is fully accountable for the accuracy, integrity and quality of advice provided, ensuring that decisions are based on sound evidence, but at times may be required to make effective judgements under pressure or in the absence of complete information or expert advice.
- The position works within a framework of legislation, policies, professional standards, and resource parameters.
- The levels of authority delegated to this position are those approved and issued by the Chief Executive Officer. All delegations will be in line with the ANSTO Delegation Manual AS-1682 (as amended or replaced).

Key Challenges

- Building effective and productive networks across ANSTO and externally.
- Keeping abreast of recent advances in new ¹³¹I, ^{99m}Tc, ¹⁷⁷Lu and ^{Tb161} radiopharmaceuticals, laboratory management, quality systems and radiation safety, ensuring continual improvement, implementation of best practice and maximising the user experience.
- Balancing operational and strategic demands in highly complex, heavily regulated, tightly constrained, and dynamic environment to ensure successful delivery of agreed objectives.
- Understanding and balancing the different expectations from a variety of users, collaborators, and partner communities, particularly ANSTO nuclear medicine businesses and the external nuclear medicine community.

KEY RELATIONSHIPS

Who	Purpose
Internal	
Manager, Radiochemistry	<ul style="list-style-type: none">• Receive broad guidance and direction.• Receive performance requirements consistent with the business plan and objectives.• Report on compliance of the instrumentation.• Provide advice on operational and capital budgetary requirements.• Recommend and gain approval for facility modifications, enhancements, improvements, and process/procedure changes or improvements.• Escalate issues and propose solutions.• Provide regular updates on key tasks, issues, and priorities.• Provide expert, authoritative and evidence-based advice.
Radiochemistry Team Members	<ul style="list-style-type: none">• Determine work priorities.• Deliver to the business plan.• Lead team members and work collaboratively to contribute to the delivery of high impact outputs.• Provide expert scientific advice, analysis, and leadership.• Influence and shape group decision making processes, planning, and goals.• Collaborate and share accountability.• Identify and negotiate solutions to conflicting demands on resources.

Direct Reports	<ul style="list-style-type: none"> • Provide guidance, direction and advice. • Provide performance requirements consistent with business plans and objectives. • Monitor and evaluate performance. • Provide regular updates on key tasks, issues and priorities. • Allocate tasks, set task priorities to ensure smooth and effective operation of laboratory and maximise user experience.
Internal researchers, facility users and capability providers	<ul style="list-style-type: none"> • Collaborate and share knowledge. • Provide expert advice, analysis, guidance, and support. • Monitor trends and progress against agreed project plans and develop strategies to ensure project delivery. • Provide user supervision and ensure safety, regulatory and quality compliance. • Negotiate access to OPAL irradiation facilities and associated support services. • Gather intelligence on trends within the field of scientific discipline.
External	
ANSTO Nuclear Medicine and NST Subject Matter Experts	<ul style="list-style-type: none"> • Collaborate and share knowledge. • Provide expert advice, analysis, and leadership.
Nuclear medicine community, universities, industrial business entities, national and international research organisations, post graduate and undergraduate students	<ul style="list-style-type: none"> • Provide expert advice and analysis • Build effective and productive networks • Identify opportunities for productive engagement and facilitate access • Ensure safety and regulatory compliance • Provide training and supervision while using ANSTO's facility

POSITION DIMENSIONS

Staff Data	
Reporting Line	Radiochemistry Group Manager
Direct Reports	3 x Radiochemists / Senior Radiochemists 3 x Principal Radiochemists
Indirect Reports	Nil

Financial Data (2022/2023)	
Revenue / Grants	\$400,000
Operating Budget	NA
Staffing Budget	\$350,000
Capital Budget	\$250,000
Assets	\$4,000,000

Special / Physical Requirements

Location:	Lucas Heights Working in different areas of designated site/campus as needed
Travel:	Operational needs may require temporary and/or periodic assignments at collaborative partner facilities within Australia or training assignments both nationally and internationally.
Physical:	Office based physical requirements (sitting, standing, minimal manual handling, movement around office and site, extended hours working at computer) Laboratory facility physical requirements (manual handling, standing for long periods, operating machinery & equipment) Wearing personal protective equipment for the handling of hazardous and/or radioactive materials
Radiation areas:	Will be required to work in radiation areas and undertake duties in an area where radioactive materials are handled under tightly regulated and controlled safety conditions Perform duties with and in an area where hazardous chemicals or materials are handled under tightly controlled safety conditions Perform duties in an area where radioactive materials are handled under tightly controlled safety conditions
Hours:	Willingness to work extended and varied hours based on operational requirements
Clearance requirements:	Satisfy ANSTO Security and Medical clearance requirements

Workplace Health & Safety

Specific role/s as specified in AG-2362 of the ANSTO WHS Management System	All Workers Other specialised roles identified within the guideline a position holder may be allocated to in the course of their duties
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ORGANISATIONAL CHART

Refer to published Organisational Chart.

KNOWLEDGE, SKILLS AND EXPERIENCE

1. PhD in radiochemistry, inorganic, organic or medicinal chemistry or pharmaceutical sciences.
2. Extensive knowledge and experience with the manufacture of radiopharmaceuticals, their development and radioanalytical measurement.
3. Significant experience and knowledge in the development of [131I]radioiodine, [177Lu]lutetium, [Tc99m]technetium and [Ga68]gallium radiopharmaceuticals and radiolabelling technologies research and development and / or using other reactor or cyclotron-based radioisotopes.
4. Demonstrated ability in leading and managing staff, including coaching and mentoring skills. Experience in providing constructive feedback on performance, as well as give advice and guidance on ways of developing skills, knowledge, and experience.
5. Strong project management experience, including the co-ordination of the work of other staff, effective deployment of resources, ability to manage multiple parallel tasks, priority management and organisational skills.
6. Proven experience ensuring own and work of others complies with quality, safety, standards, regulatory and statutory requirements ideally gained through working within a highly regulated manufacturing environment.
7. Demonstrated high level interpersonal, communication and negotiation skills with the capacity to influence key decision-makers.
8. Proven experience to develop and maintain productive working relationship with a wide variety of staff, commercial and academic partners, and regulators.

9. Demonstrated research leadership and publication track record in radiopharmaceutical and radiolabelling technologies development.

VERIFICATION

This section verifies that the line manager and appropriate senior manager/executive confirm that this is a true and accurate reflection of the position.

Line Manager		Delegated Authority	
Name:	Ivan Greguric	Name:	John Bennett
Title:	Manager, Radiochemistry	Title:	Leader, Biosciences
Signature:		Signature:	
Date:		Date:	

Appendix 1

ANSTO Job Families
Accounting & Finance
Administration
Communications & Marketing
Compliance & Regulation
Engineering and Technical
Human Resources
ICT & Digital Solutions
Information & Knowledge Management
Legal
Manufacturing
Monitoring & Audit
Operations
Organisational Leadership
Project & Program
Research
Science
Security & Intelligence
Senior Executive
Service Delivery
Strategic Policy
Trades & Labour