



## NOTES

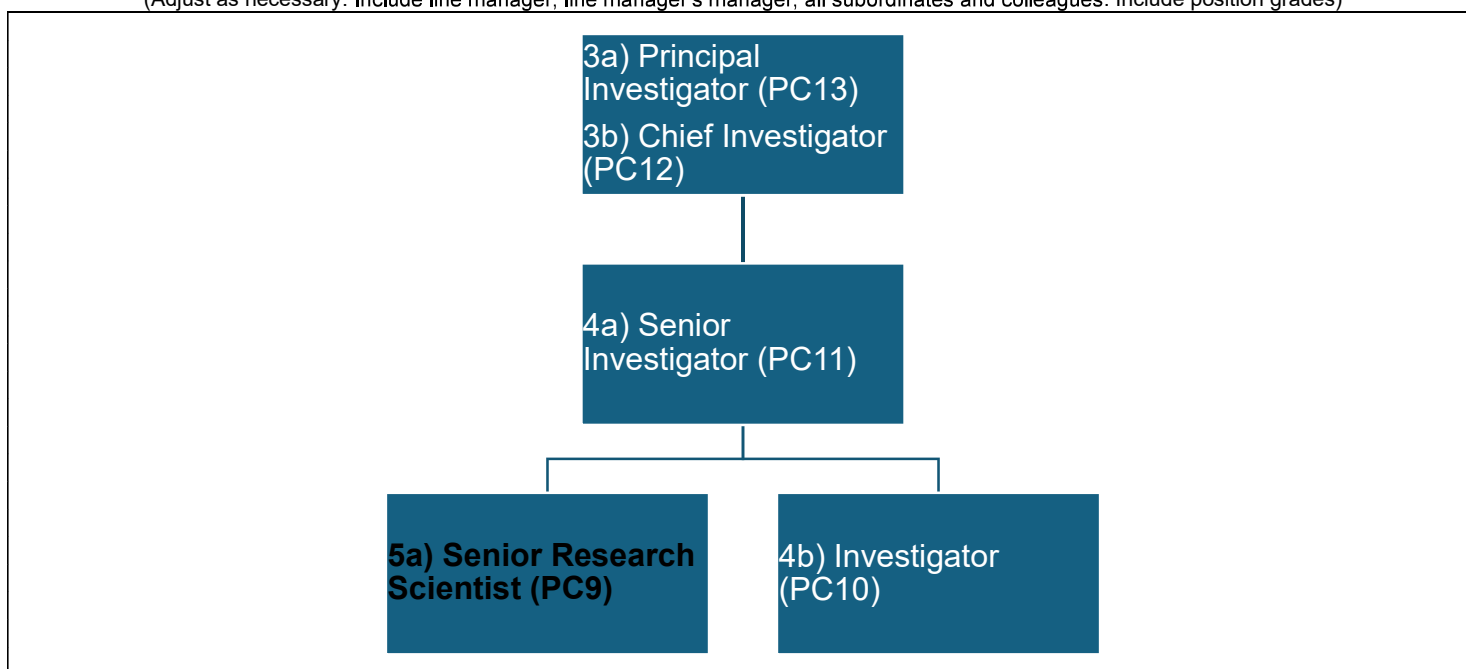
- Forms must be downloaded from the UCT website: <https://forms.uct.ac.za/forms.htm>
- This form serves as a template for the writing of position descriptions.
- A copy of this form is kept by the line manager and the position holder.

## POSITION DETAILS

Position title	Senior Research Scientist		
Job title (HR Business Partner to provide)	Senior Research Scientist		
Position grade (if known)	PC9	Date last graded (if known)	2018
Academic faculty / PASS department	PASS		
Academic department / PASS unit	Science/Drug Discovery and Development (H3D)		
Division / section	Medicinal Chemistry		
Date of compilation	03/02/2025		

## ORGANOGRAM

(Adjust as necessary. Include line manager, line manager's manager, all subordinates and colleagues. Include position grades)



## PURPOSE

The main purpose of this position is to provide scientific, technical, and organizational support to an interdisciplinary translational research team discovering and developing innovative, lifesaving medicines. Accountabilities and responsibilities of the Senior Research Scientist include:

Scientific & Research Impact

- Conduct a variety of tasks in a drug discovery laboratory requiring specific scientific or technical knowledge and laboratory techniques with regular input from supervisor
- Perform multi-step organic syntheses and routine laboratory activities in support of drug discovery projects/programs
- Address concerns and issues compound synthesis as they arise and assist with trouble-shooting if issues are identified, including optimization of synthetic protocols and routes
- Proactively identify areas of improvement in the laboratory and raise these with supervisor
- Provide basic data analysis and assistance in compound design
- Document own experiments in accordance with H3D lab notebook policies (including tables, graphs, etc.)
- Periodically present results to supervisor and/or drug discovery team
- Manage lab space and equipment, including the maintenance, calibration and validation of laboratory equipment at H3D and, where applicable, at UCT

- Work collaboratively with all team and lab members; provide technical assistance and share technical know-how with technical community and project teams at H3D and UCT as needed
- Actively participate in lab and team meetings as needed
- Help/train junior members of the team in data generation and interpretation (technician level members) and actively coach/mentor them

#### Scientific/Technical & Operational Know-how

- Demonstrate ability to apply technical knowledge to complete work assignments and a deep understanding of modern techniques, instrumentation and underlying principles
  - Help academic labs at UCT use drug discovery-related technologies and equipment where appropriate
  - Perform duties with appropriate knowledge of relevant laboratory tools and procedures
  - Propose ideas for and implement H3D-wide technology or research operations projects
  - Demonstrate a working knowledge of relevant research policies, guidelines and procedures; assist in the preparation of SOPs for H3D, where appropriate; complete compliance training as required
- Operate and perform routine maintenance on instruments at H3D (and UCT as needed); identify and report unsafe equipment, conditions and practices so that they may be corrected prior to an incident

#### Decision Making

- Propose ideas and provide assistance in trouble-shooting of synthetic procedures, recommend use of alternative technologies or experimental protocols as needed
- Conduct experiments and organize data and seek input from supervisor as needed
- Demonstrate a clear understanding of how own experiments fit into overall project goals and organize day-to-day work accordingly

#### Desired Behaviors

Apply H3D Values & Behaviors with a specific focus on:

- Proactively share technical expertise and ideas for improvements with other members of the team/laboratory and contribute your ideas to problem-solving on an ongoing basis; encourage other technical staff to do the same
- Interact with others in a positive, collaborative manner and help resolve conflicts in a constructive manner; encourage others to do the same
- Support H3D mission and leadership decisions and prioritize own tasks in support of these decisions and towards accomplishing research goals
- Strive towards working in a team-based, matrix organization in which all research activities are targeted towards overall H3D portfolio goals

**CONTENT**

Key performance areas	% of time spent	Inputs (Responsibilities / activities / processes/ methods used)	Outputs (Expected results)
1 Scientific Support	70%	<ul style="list-style-type: none"> <li>Conduct the organic synthesis of medicinally active compounds in the H3D laboratory</li> <li>Perform FHA, H2L and LO on chemical series</li> <li>Undertake literature and database searches pertinent to the research area</li> <li>Assist in the preparation of material for reports, patents presentations and publication of results and present results as required by the project team</li> <li>Application of existing procedures</li> <li>Routine generation of data</li> <li>Regular updates of Dotmatics notebook with experimental details and analytical data as per the guidelines on the organization</li> <li>Proactively conduct basic data analysis and assist with compound design</li> <li>Quality control of data produced</li> <li>Presentation of progress and project data to the project team</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of intermediates and final compounds with drug like properties in a timely manner</li> <li>Identify compounds with drug-like properties</li> <li>Projects completed as per project plan from initial planning phase to final implementation and documentation</li> <li>Research outputs</li> <li>Research reports</li> <li>Proficient in the use of the ENB and all software for drug discovery</li> <li>Routine services (screening, assays, purification etc.) provided</li> <li>Quality of data monitored</li> <li>Well maintained, updated Dotmatics notebook with reproducible records and experimental details</li> <li>Scientific interpretation of data and new compound designs</li> <li>Quality of compounds monitored</li> <li>Progress and project data presented clearly and correctly</li> </ul>
2 Technical Support	10%	<ul style="list-style-type: none"> <li>Use all equipment in a modern medicinal chemistry laboratory, including performing chemical reactions, purification / characterization techniques e.g. 1H NMR, LCMS, chromatography in order to prepare compounds useful for a drug discovery program</li> <li>Trouble-shoot technical problems and routine processes</li> </ul>	<ul style="list-style-type: none"> <li>Proficient in the use of all equipment in a modern medicinal chemistry laboratory, including performing chemical reactions, purification / characterization techniques e.g. 1H NMR, LCMS, chromatography</li> <li>Resolution of technical issues</li> </ul>
3 Training and professional development	10%	<ul style="list-style-type: none"> <li>Provide advice in synthetic techniques to staff where applicable</li> <li>Seek mentorship</li> <li>Attend seminars, workshops, training courses etc.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure that new synthetic techniques are correctly and safely executed by staff members</li> <li>Notable improvement in understanding of drug discovery process, organic chemistry skills leading to better project support</li> </ul>

4	Organizational Support	10%	<ul style="list-style-type: none"> <li>• Management of laboratory or laboratory space</li> <li>• Preparing standard operating procedure (SOP) documents</li> <li>• Stock-take</li> <li>• Timely ordering of chemicals and synthetic building blocks</li> <li>• Ordering consumables</li> <li>• Laboratory housekeeping (waste removal, keeping work space clean and safety compliant, stock control etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Keep the laboratories and laboratory support services fully operational</li> <li>• Lab fully operational with consumables and chemical stock up to date</li> <li>• Chemicals ordered on time to ensure that there are no delays</li> <li>• Lab housekeeping conducted in accordance with H3D and UCT guidelines</li> <li>• 100% safety record</li> <li>• Notebook audits conducted</li> <li>• Sample storage maintained</li> <li>• Lab fully operational with consumables and chemical stock up to date</li> <li>• Lab housekeeping conducted in accordance with H3D and UCT guidelines</li> <li>• 100% safety record</li> </ul>
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### MINIMUM REQUIREMENTS

Minimum qualifications	<ul style="list-style-type: none"> <li>BSc (Hons) degree in synthetic chemistry or medicinal chemistry is required.</li> </ul>			
Minimum experience (type and years)	<ul style="list-style-type: none"> <li>Good knowledge of organic chemistry principles and techniques.</li> <li>Hands-on experience in synthetic organic chemistry for 3+ years is essential.</li> <li>Experience of working in a drug discovery group for 1+ years</li> <li>Ability to write effectively for patent and scientific publications will be advantageous</li> </ul>			
Skills	<ul style="list-style-type: none"> <li>Organizational and chemistry lab skills</li> </ul>			
Knowledge	<ul style="list-style-type: none"> <li>Lab procedures and safety as well as familiarity with technical equipment</li> <li>Demonstrated use of fundamental concepts of drug discovery, e.g. SAR analysis, DMPK etc will be advantageous</li> </ul>			
Professional registration or license requirements	N/A			
Other requirements (If the position requires the handling of cash or finances, other requirements must include 'Ability to handle cash or finances'.)				
Competencies (Refer to <a href="#">UCT Competency Framework</a> )	Competence	Level	Competence	Level
	Excellent oral and written communication	2		
	Strong technical background in the use of drug discovery technologies and related laboratory techniques	2		
	Strong interpersonal skills	2		
	Teamwork/collaboration	2		




### SCOPE OF RESPONSIBILITY

Functions responsible for	Independently synthesize compounds for a medicinal chemistry programme within a team setting.
Amount and kind of supervision received	Daily oversight by more senior staff member
Amount and kind of supervision exercised	Supervision of same level or more junior staff members may be required
Decisions which can be made	Calling in technical assistance for equipment repairs or services and replenishing stock
Decisions which must be referred	Financial decisions, purchasing decisions, organizational decisions, HR decisions etc.

### CONTACTS AND RELATIONSHIPS

Internal to UCT	
External to UCT	

### AGREED BY

	PRINT NAME	SIGNATURE	CONTACT NO.	DATE
Position Holder				
Direct Line Manager/Supervisor	Andre Horatscheck		X4629	05/02/2025
Area Line Manager	Ayesha Banderker		X1438	05.02.2025
HOD	Prof. Kelly Chibale		X5495	05.02.2025
Dean / ED				