

<b>Position Title</b>	Research Fellow
<b>Group/Portfolio</b>	Sciences / Centre for Planetary Health and Food Security
<b>Classification</b>	Research Fellow Grade 1 (RF1)
<b>Position Number</b>	
<b>Reports To</b>	Senior Research Fellow, Crop and Pathogen Genomics
<b>Employment Type</b>	Part time (80%) Fixed Term (2.5 years)

## 1.0 Position Purpose

The Research Fellow position involves contributing to one of more areas of research within the Centre for Planetary Health and Food Security within the Sustainable Agricultural Systems research group.

The Research Fellow is responsible for delivering outcomes as detailed in the GRDC funded project "Program 1 - Pathogen studies: Effective genetic and sustainable management of Ascochyta blight of Chickpea (Phase 2)". The role will comprise obtaining infected plant samples, isolating and curating an isolate collection and database, conducting pathology bioassays, extract RNA and DNA for sequencing and applying bioinformatic pipelines and in silico analysis genomic data. Methods will include molecular and pathology experimental approaches, combined with generation and analyses of next generation sequencing data, as detailed in the Key Capabilities section below.

These activities will support an industry-funded research program to identify genetic and epigenetic drivers of pathogenicity in *Ascochyta rabiei* and molecular markers for diagnostics assays.

## 2.0 Eligibility Requirements

- The occupant of this position will hold a doctorate in molecular biology, plant pathology or plant/pathogen genomics or equivalent qualifications/work experience in a relevant field.

Research experience and skills in some or all of the following areas:

- Experience working in a pathology lab including aseptic techniques, isolation, single-sporing and culture of fungi from infected plant material, preparing media and inoculum, histology, etc.
- Designing and executing pathology plant bioassays in growth rooms including preparation of soil, plant husbandry, inoculation with pathogens, evaluation of disease symptoms, etc.
- Experience working in a molecular laboratory including nucleic acid extraction, purification, quality assessment and amplification (using PCR, qPCR), cloning and library preparation for high-throughput sequencing (Illumina, Nanopore)

- High level data analysis and visualisation of experimental and genomic and statistical inference of results (preferably using R)
- Excellent communication and interpersonal skills and willingness to engage and travel to develop relationships with industry
- High level oral and written reporting skills
- Able to work in a team and as a mentor to junior staff and students
- Able to work independently, think critically and meet reporting milestones

*The following two skills will be highly desirable, but not essential (training will be provided to the successful candidate):*

- Gene editing using CRISPR or other approaches
- Knowledge and expertise running bioinformatic pipelines to analyse genomic data datasets (from RNA-Seq, WGS, GBS, Methyl-Seq, etc) within a Linux environment on HPC clusters (using Snakemake/Nextflow and Slurm/Torque scheduling systems)

### 3.0 Key Responsibilities

- Maintain and curate an isolate database of *Ascochyta rabiei* through collaboration with state pathologists, researchers and industry (will require occasional travel).
- Conduct molecular, pathology and genomic experiments that contributes to the research objectives of the Research Group.
- Analyse, summarise and visualise experimental and genomic datasets.
- Contribute to milestone report, scientific publications in peer-reviewed journals and any related funding applications.
- Attend and present scientific outputs at broader research program meetings, industry updates and scientific conferences.
- Maintain a good publication record of papers in international, esteemed peer-reviewed journals.
- Assist in mentoring and supervising higher degree research candidates.
- Promote compliance with relevant legislation and University policies and procedures, including research ethics, equity and health & safety, and laboratory standards, and exhibit good practice in relation to same.
- Be a leading example of the principles and values embodied in the University's Code of Conduct, and behave, act and communicate at all times to reflect fairness, ethics and professionalism.

### 4.0 Key Capabilities

- Griffith University identifies the attributes of resilience, flexibility, creativity, digital literacy and entrepreneurship as critical to our graduates' success, in the rapidly changing future world of work. We have established a Griffith University Capability Development Framework to provide a common language of some of the non-technical organisation skills that will support our

staff to thrive now and into the future. The Capability Development Framework will assist you to understand the current skill level of this position in the non-technical but critical skill domains that are increasingly important in a changing workplace context.

To read about some of the non-technical organisation skills for this position, please see the Leads Self section of our [Capability Development Framework](#).