Post-doctoral fellow -
Biology and management of necrotrophic pathogens

CSIRO Plant Industry, St Lucia, QLD
$65K - $72K [Australian$] plus Superannuation
Reference Number: 2007/599

The Wheat Fusarium research team develops and applies advanced knowledge of pathogen biology and epidemiology; genes and gene networks that control host-pathogen interactions and genetics of resistance to deliver disease resistant elite material to breeding ventures.

We require an experienced postdoctoral scientist with a proven track record of achievement in research on plant disease epidemiology using conventional and molecular tools to improve the understanding of toxigenicity and aggressiveness of Fusarium pathogens of wheat, to develop predictive models to help minimize grain mycotoxin contamination and to maintain effective collaborative linkages with other Australian and overseas researchers.

The successful applicant will have a PhD in plant pathology or a related discipline to study toxigenicity, aggressiveness and epidemiology of Fusarium pathogens causing crown rot of wheat. This person will possess a good publication record in the field of fungal plant disease epidemiology, population genetics and/or mycotoxin and be able to demonstrate strong organisational abilities. Excellent verbal and written communication and presentation skills, ability to work independently and use initiative plus the ability to work cohesively in a team environment are essential

The appointee will work closely with a second postdoc who will carry out genetics & pre-breeding research to develop crown rot resistant germplasm. He/she will also liaise with Australian & overseas researchers to strengthen our joint work on population genetics & epidemiology of Fusarium.

Main Responsibilities:

Under general/limited direction:

1. Undertake research in Australia on the toxigenicity, aggressiveness and epidemiology of Fusarium pathogens causing crown rot of wheat. The primary tasks will be to study toxigenicity & aggressiveness of pathogen populations using conventional and molecular tools; study the influence of weather and wheat varieties on toxigenicity; and develop models to predict grain mycotoxin contamination from Fusarium infection causing crown rot.

2. Collaborate with scientists across CSIRO Plant Industry and other research providers to determine the extent of grain mycotoxin from crown rot and to develop predictive models to help minimize mycotoxin contamination.

3. Communicate frequently and cooperatively with Chief, Program Leader, peers, project staff and other local, national and international collaborators on project plans and progress.

4. Adopt high scientific standards in the conduct and organisation of the project and in the writing up and communication of research results.

5. Participate, as appropriate, in duties and activities that enhance the operation and status of the program, division and organisation.

SELECTION CRITERIA

Pre-requisite: PhD in Plant Pathology, Fungal Genetics, Population Genetics or a related discipline.

PROFESSIONAL/TECHNICAL SKILLS AND EXPERIENCE

1. PhD and/or equivalent and documented research in Plant Pathology, Fungal Genetics, Population Genetics or a related discipline.
2. Extensive experience and a proven track record of achievement in research on disease epidemiology and genetics of fungal plant pathogens using conventional and molecular tools.
3. Research and training experience in the analysis and management of mycotoxin contamination in grains, including the development and use of predictive models.
4. Evidence of research collaboration and active participation in cooperative research activities.

PERSONAL ATTRIBUTES

5. Evidence of good communication skills including the ability to make professional presentations to a wide range of audiences.
6. Demonstrated strong organisational skills and an ability to prioritise tasks and meet deadlines.
7. Ability to work independently and use initiative plus the ability to work cohesively in a team environment.
8. Demonstrated commitment to a high level of personal performance and the provision of quality outcomes.
9. Ability to adapt to changes in procedural demands in the course of a project.
10. A current driver's license and willingness to travel interstate.

For selection documentation and details on how to apply visit www.csiro.au/careers. If you are unable to lodge your application online you can post your application to: CSIRO Careers Online, PO Box 225, DICKSON, ACT 2602, Australia or fax your application (quoting reference number 2007/599 to 612 6276 6707)

If after reading the selection documentation you require further information please contact Dr. Sukumar Chakraborty email sukumar.chakraborty@csiro.au or phone (617) 3214 2677