POSTDOCTORAL RESEARCH FELLOWSHIP OPPORTUNITIES #1

As part of an international research collaboration between the University of KwaZulu-Natal (South Africa) and Jiangsu Academy of Agricultural Sciences (China), there exist several postdoctoral positions in the following areas (Please see the attached project summaries for details):

- Molecular mechanisms for the synthesis of amylose in rice **(Ref. Postdoc2019/01)**
- Effects of genetic and environmental factors on the expression of aroma in rice **(Ref. Postdoc2019/02)**
- Gene editing technologies to create disease and insect resistant rice germplasm **(Ref. Postdoc2019/03)**
- Mechanism of drought tolerance in rice **(Ref. Postdoc2019/04)**
- Effectiveness of genotype- environment interaction on crop breeding efficiency using meta-data from multi-environment variety trials (**Ref. Postdoc2019/05)**
- Exploration and genomic analysis of favourable alleles from wild cotton species **(Ref. Postdoc2019/06)**
- Molecular mechanisms of plant virus and vector interaction **(Ref. Postdoc2019/07)**
- Identification and functional analysis of genes associated with resistance to rice virus diseases **(Ref. Postdoc2019/08)**
- Germplasm innovation of super hybrid Pennisetum for High Cd/Zn absorbability and nitrogen fixation **(Ref. Postdoc2019/09)**
- Genetic characterization of high fertility and heat tolerance in sheep and goats **(Ref. Postdoc2019/10)**
- Development and evaluation of recombinant vaccines against mycoplasmas in swine **(Ref. Postdoc2019/11)**
- Co-infection of swine respiratory pathogens and interaction with the host innate immune system **(Ref. Postdoc2019/12)**
- Studies on the functions of the key surface proteins of swine mycoplasmas **(Ref. Postdoc2019/13)**
- Construction of a recombinant subunit vaccine against *Mycoplasma ovipneumoniae*. **(Ref. Postdoc2019/14)**
- Effect and mechanism of nano-oxygen interface material on organic carbon mineralization and soil fertility improvement **(Ref. Postdoc 2019/15)**

APPLICATION INFORMATION

Submission Requirements:

CV plus 1-2 page motivation indicating experience in selected research area; contact details of three (3) referees

Applications to be sent to:

JAASPostdocs@ukzn.ac.za

Candidates should clearly indicate the reference number of the research topic being applied for.

Closing date for applications: 31 January 2019

Note: Based on the experience, successful candidates may also be required to contribute to other research activities at UKZN and JAAS, in addition to the chosen research.

We invite applications from interested, highly motivated and qualified candidates **of any nationality** who meet the following criteria:

- **Be under 35 years of age**
- **Have obtained the doctoral degree within the past 3-4 years**

Successful candidates will be expected to spend the first year at JAAS for necessary procedures related to their appointment. **Free apartment** will be provided while in China (Only utilities will be borne by the postdocs). Subsequently, the Postdoc could be based either at UKZN or JAAS depending on the nature of the project and the agreement between supervisors (UKZN and JAAS).

Salary: An annual salary of RMB 120,000 (before tax)

POSTDOCTORAL RESEARCH FELLOWSHIP OPPORTUNITIES #2

As part of an international research collaboration between the University of KwaZulu-Natal (South Africa) and Jiangsu Academy of Agricultural Sciences (China), there exist several postdoctoral positions in the following areas *(Please see the attached project summaries for details)*:

- Effect of aggregate microstructure on the soil organic carbon sequestration under continuous straw return **(Ref. Postdoc2019/16)**
- Mechanisms for efficient removal of nitrogen from polluted water during low temperature seasons **(Ref. Postdoc2019/17)**
- Development and application of environmentally-friendly material for the removal of nitrogen, phosphorus and other harmful substances from polluted water **(Ref. Postdoc2019/18)**
- Studies on the microbial mechanism for efficient anaerobic conversion of poor biomass to biogas **(Ref. Postdoc2019/19)**
- Gene discovery for nitrogen use efficiency in maize **(Ref. Postdoc 2019/20)**
- Herbicide-resistant crop: Identification of new loci for herbicide resistance and resistance mechanism analysis **(Ref. Postdoc2019/21)**
- Identification, distribution, and amplification mechanisms of transposable elements (TEs) in plant genomes **(Ref. Postdoc2019/22)**
- Exploring elite alleles and association mapping of QTL for *Fusarium* head blight resistance in wheat **(Ref. Postdoc2019/23)**
- Intervention mechanism of blueberry anthocyanin metabolites on diabetes **(Ref. Postdoc2019/24)**
- Risk evaluation of multi-mycotoxins in wheat and their microbial/enzymatic degradation **(Ref. Postdoc2019/25)**
- Immunoassay-based identification of food fraud, drug and foodborne pathogenic microorganisms **(Ref. Postdoc2019/26)**
- Monitoring, regulation and diagnosis of growth indices in rice plant for improved rice yield **(Ref. Postdoc2019/27)**
- Study of the mechanisms of organic pollutants' absorption by plants **(Ref. Postdoc2019/28)**
- Role of endophyte bacteria in the degradation of pesticides in host plants and farmland **(Ref. Postdoc2019/29)**
- Development of nanostructured lipid carriers for the controlled release of curcumin in the intestinal tract **(Ref. Postdoc2019/30)**

APPLICATION INFORMATION

Submission Requirements:

CV plus 1-2 page motivation indicating experience In selected research area; contact details of three (3) referees

Applications to be sent to:

JAASPostdocs@ukzn.ac.za

Candidates should clearly indicate the reference number of the research topic being applied for.

Closing date for applications: 31 January 2019

Note: Based on the experience, successful candidates may also be required to contribute to other research activities at UKZN and JAAS, in addition to the chosen research.

We invite applications from interested, highly motivated and qualified candidates of **any nationality** who meet the following criteria:

- **Be under 35 years of age**
- **Have obtained the doctoral degree within the past 3-4 years**

Successful candidates will be expected to spend the first year at JAAS for necessary procedures related to their appointment. **Free apartment** will be provided while in China (Only utilities will be borne by the postdocs). Subsequently, the Postdoc could be based either at UKZN or JAAS depending on the nature of the project and the agreement between supervisors (UKZN and JAAS).

Salary: An annual salary of RMB 120,000 (before tax)