

Postdoctoral positions in genome engineering via CRISPR/Cas systems

The Mahfouz laboratory for genome engineering at KAUST has two postdoctoral positions in the area crop bioengineering via CRISPR/Cas systems. The goal of our research is to develop innovative tools for efficient genome engineering for targeted improvement of crop traits.

These postdoctoral research positions are focused on the following research projects:

- 1) Tissue culture-free genome engineering via CRISPR/Cas9 system.
- 2) Foreign DNA-free cereal genome engineering.
- 3) Targeted insertions and gene stacking via HDR in cereal genomes.

You are expected to have expertise to efficiently perform the following duties:

- Design, build and engineer a variety of plasmid constructs including binary vectors.
- Transient transformation into tobacco plants via agroinfection to test the designs and catalytic activity of the CRISPR/Cas machinery.
- Generate stable expression lines with CRISPR/Cas9 machinery in model and non-model plant species.
- Use of Agrobacterium and gene gun for plant transformation.
- Establish germline engineering in crop species.
- Genotyping of edited plants using T7EI, Sanger sequencing and restriction enzyme loss mutation detection assays.
- Genome wide gene editing via sgRNA libraries.
- Analysis of deep amplicon sequencing data.
- Phenotypic assays of edited plant species.
- Present and publish research findings.

Required qualifications:

- A Ph.D. in molecular plant science, biochemistry, biotechnology, molecular biology or related field is required.
- Demonstrated strong record of research productivity as evidenced by good quality publications.
- Effective writing and presentation skills.

Compensation package:

We offer a highly competitive tax-free salary, free housing, subsidized health insurance, and other benefits.

Please send your application as single PDF file by e-mail to (magdy.mahfouz@kaust.edu.sa). Applications should include a full CV with publication list, a 2-5-page statement of research interests, and contact information of three academic references. These positions are available immediately and remain open until filled.

About KAUST:

KAUST is an international graduate-level, merit-based research university dedicated to advancing scientific and technological education and research, acting as a catalyst for innovation, economic development and social prosperity in the region and the world. Our research strives to enhance the welfare of society with a special focus on four areas of global significance – food, water, energy and the environment. Based near Jeddah, Saudi Arabia, KAUST has attracted top-notch faculty and staff from all over the world, with more than 80 nations represented on campus.