

Opportunity Title: Postdoctoral Microbiological Research – Producing Anti-tick Vaccines in Yeast

Opportunity Reference Code: ARS-TBFRU-2015-0073-01

Organization U.S. Department of Agriculture (USDA)

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How to Apply A complete application consists of:

- An application
- Official transcript(s) – scanned copies are acceptable
- A current resume/CV

If you have questions, send an email to USDA-ARS@oru.org. Please include the reference code for this opportunity in your email.

Description A research opportunity is available with the Tick and Biting Fly Research Unit (TBFRU) in Kerrville, Texas. The selected applicant will be responsible for producing milligram quantities of several recombinant tick proteins using a yeast production system, following well-defined standardized laboratory procedures. S/he will be supervised by the Project Leader and must be able to follow a strict microbiological protocol to grow 0.5-2 liter cultures of strains of the yeast *Pichia pastoris* that express a recombinant protein. The culture growth protocol takes from 3-9 days, depending on the specific yeast strain. Standard sterile microbiological techniques are used at this stage of the protocol. Following culture growth, the recombinant protein must be purified from the yeast culture using a very specific protein purification procedure.

It is critical that the selected applicant be skilled in time-management, as there are steps in the protocol that require flexibility in working schedule, sometimes including non-standard work hours and/or weekend hours. It is also critical that s/he be able to precisely follow a protocol with little or no deviation, as production of recombinant proteins in yeast is very dependent upon following strict time lines aligned with culture growth characteristics.

Standard yeast growth media are used and protein purification includes steps with filtrations, centrifugations, affinity chromatography, and spectrophotometric quantification.

Full training will be provided by Project Leader and project-associated biological technician and support scientist.

The appointment is full-time for one year and may be renewed upon recommendation of the ARS and availability of funding. The participant must show proof of health and medical insurance. Health insurance can be obtained through ORISE.

The participant does not become an employee of the ARS or ORISE.

This opportunity is available to U.S. citizens, Lawful Permanent




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Residents (LPR), and foreign nationals.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, sex, religion, national origin, mental or physical disability, genetic information, sexual orientation, or covered veteran's status.



For more information about the ARS Research Participation Program, please visit <http://www.orise.orau.gov/usda-ars>.

Qualifications To be eligible, applicants must have received a doctorate degree in Chemistry, Biochemistry, or Biological Sciences with classroom and laboratory curriculum in microbiology, molecular biology, biochemistry or organic chemistry within five years of the desired starting date.

The ideal candidate will have:

- Experience with growing strains and cultures of Escherichia coli, Saccharomyces cerevisiae, Pichia pastoris, or other bacterial and/or yeast specie
- Prior experience with sterile techniques in laboratory settings
- Demonstrated ability to perform centrifugation, gel chromatography, and spectrophotometric protocols

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (1 )
 - **Life Health and Medical Sciences** (7 )