

# Contracted Work: Unpacking Alpha-gal Syndrome Landscape Analysis

*Call for Consultant*

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## Overview

The Foundation for Food & Agriculture Research (FFAR) seeks a researcher to conduct a landscape analysis of Alpha-gal Syndrome (AGS) with a dual focus on (1) the clinical and immunological dimensions of the human disease and (2) the biology and ecology of the tick vector.

## FFAR Background

FFAR is a non-profit organization that builds public-private partnerships to fund audacious research addressing the biggest challenges in food and agriculture. FFAR is committed to providing every person access to affordable, nutritious food grown on thriving farms. The Foundation pioneers scientific and technological innovation by funding research that fills critical research gaps. Ultimately, FFAR's partnership and results benefit farmers, consumers and the environment.

FFAR's scientific research programs are developed in partnership with industry, government, academia and non-profit institutions. FFAR is focused on catalyzing innovation to solve pressing food and agriculture challenges that affect the lives of all Americans. Leveraging public and private resources, FFAR increases the scientific and technological research, innovation and partnerships critical to enhancing sustainable production of nutritious food for a growing global population.

## Unpacking AGS Project Background

AGS is an emerging, tick bite-associated, immunoglobulin E (IgE)-mediated allergic response to galactose-alpha-1,3-galactose (alpha-gal), a sugar molecule found in most non-primate mammals (Carpenter A et. al., 2023). As of 2023, AGS was the 10th most common food allergen in the U.S. (Goodman B, 2023), and the Centers for Disease Control and Prevention (CDC) has identified it as a growing clinical and public health threat (Carpenter A et. al., 2023).

Despite the rising prevalence of AGS and potential negative impact on the meat industry in the U.S., very little is understood about the condition. Substantial knowledge gaps exist in understanding AGS risk factors and prevention strategies; biological mechanisms and natural history; and disease diagnosis, treatment and management.

While the lone star tick is the primary vector associated with AGS in the U.S., other species (e.g., *Ixodes scapularis* and *Ixodes pacificus* in the U.S. and *Ixodes holocyclus* in Australia) have been implicated, raising questions about global vectors and vector-host-pathogen interactions (van Nunen et. al., 2009). We lack a comprehensive synthesis of tick-host ecology, seasonal activity and behavior patterns that facilitate transmission of AGS. Furthermore, the biological mechanisms by which tick saliva induces sensitization to alpha-gal are not well understood.

The purpose of this consultancy is to synthesize existing scientific literature, clinical and epidemiological data, and stakeholder perspectives on AGS to identify knowledge gaps, research opportunities, and potential interventions into human health and tick ecology. The analysis will serve as a resource for researchers, funders and other stakeholders within the food system.

## Scope of Work

The analysis will include:

Systematic Review of peer-reviewed existing literature.

- Conduct a rigorous review of peer-reviewed and grey literature on:
  - AGS pathophysiology, diagnosis, management, treatment and prevention;
  - Tick biology, ecology, distribution and host-vector dynamics relevant to AGS risk;
  - Economic impact of AGS.
- Include comparative and regional perspectives, highlighting geographic variation in disease prevalence and tick ecology.

Bibliometric mapping to identify research clusters, leading institutions and initiatives, funding trends and publication gaps.

- Use bibliometric analysis tools to map the AGS research landscape, identifying publication trends, leading authors and institutions/initiatives, collaborative networks and disciplinary intersections between health and ecological research.

Thematic Synthesis of research findings across disciplines.

- Integrate findings across disciplines (clinical, immunological, ecological, entomological, public health).

- Highlight interdisciplinary connections and thematic clusters emerging from the literature.

Gap Analysis to delineate unanswered research questions, methodological limitations and geographic blind spots.

- Identify research gaps in both human disease and tick ecology.
- Highlight unmet needs in surveillance, diagnostic tools, prevention strategies, treatment and patient support.

Expert Consultation through informal interviews with subject matter experts to validate findings and provide strategic insights.

- Engage key stakeholders and subject matter experts (scientists, clinicians, vector ecologists, public health practitioners, patients, farmers) through interviews, discussions or workshops.
- Validate findings, capture emerging perspectives and identify priority areas for research and collaboration.

## Deliverables

- Inception report detailing methodology, sources and timeline
- Draft landscape analysis report including systematic review results, bibliometric outputs, thematic synthesis and preliminary gap analysis
- Final report integrating expert feedback, with executive summary, visual data representations and actionable recommendations
- Optional: Presentation of findings to FFAR and partners

## Timeline

This is anticipated to be a 6-month contract with a researcher selected by the end of October 2025, a mid-term deliverable due by the end of January 2026, and the main deliverable due by the end of April 2026. The work will be conducted remotely and include regular video calls with FFAR and partner organizations.

## Proposals

Applicants should submit a written proposal to develop the landscape analysis. Proposals should contain:

1. Applicant profile, including qualifications and experience with similar efforts
2. Approach description, including intended methodology for the landscape analysis
3. Anticipated outputs and approximate timeline for producing documents to their final form, including a high-level outline of the final output
4. Budget and budget justification
5. 2-3 past projects and client references
6. Other items or information that may assist us in evaluating the proposal (e.g., letters of recommendation, etc.)
7. Advise for FFAR of any other areas, services or steps toward the stated objectives that are not listed above

Proposals will be evaluated and ranked in accordance with the following criteria:

- Completeness and quality of response
- Ability to meet requested service needs
- Experience with landscape analysis and scientific writing
- Hourly cost and proposed level of effort

The final award will be based on the best overall value when taking into consideration competence in scientific writing.

## Required Qualifications

- Advanced degree in public health, epidemiology, immunology, allergy research, entomology or related field
- Demonstrated experience in systematic reviews, bibliometric analysis and interdisciplinary research synthesis
- Familiarity with both vector-borne diseases and allergic/immunological conditions
- Proven ability to engage experts across disciplines and synthesize qualitative insights
- Strong analytical and writing skills

## Submission Due Date

Proposals are due October 3<sup>rd</sup>, 2025, and will be reviewed on a rolling basis. The position is open until filled. Proposals should be submitted as a PDF. Direct proposals and inquiries to [cgewa@foundationfar.org](mailto:cgewa@foundationfar.org) with the subject line: Alpha-gal Syndrome Landscape Analysis

FFAR will negotiate contract terms upon selection. All contracts are subject to internal FFAR review. An individual or university/institution will be awarded the work upon signing of a contract, which will outline the terms, scope, budget and other necessary items.

## Organizational Arrangements

FFAR's scientific program director, Constance Gewa, will be the primary internal point of contact for this analysis. The scientific program director will establish with the researcher a schedule for periodic check-ins to answer questions and provide any necessary guidance.