

National Workshop training in Functional Genomics**Call for applications**

National training in functional genomics for candidate gene validation using transgenic drosophila.

(AREF Project – CRID, Cameroon)

1. Overview

The CRID, through the AREF project, is pleased to announce a 3-day national training course on functional genomics for candidate gene validation using transgenic drosophila. This training is part of Dr. Kouamo's AREF post-placement activity to transfer knowledge received during the 6-month placement at the Institute of Molecular Biology and Biotechnology of the Foundation for Research and Technology Hellas (IMBB-FORTH), one of the most prominent life science research institutions in Greece, with an outstanding record of scientific achievements, state-of-the-art infrastructures, and a broad range of research, innovation and educational activities, based in Heraklion, Crete, to Cameroonian scientists. It will be held at the Centre for Research in Infectious Diseases (CRID), Yaoundé-Cameroon, from 19–21 August 2026.

The AREF post-placement initiative is dedicated to strengthening African capacity in advanced molecular and translational approaches for understanding vector biology, insecticide resistance, and pathogen transmission dynamics. Within this broader framework, the present training is specifically designed to address a critical capacity gap in experimental functional genomics, with emphasis on robust gene function validation approaches applicable to disease vectors and model organisms. It also aims to provide training and capacity-building programs for local researchers.

2. Scope and thematic focus

This workshop is strictly focused on experimental functional genomics and gene characterization methodologies using transgenic flies, with no overlap with bioinformatics or entomology modules, which will be delivered in separate training activities under the AVECGEN programme.

The training will provide an integrated theoretical and hands-on framework covering transgenic expression systems using *Drosophila melanogaster* and related models, including:

- Selection of candidate genes or candidate alleles
- Cloning into drosophila expression vector pUAS
- Screening of positive constructs and miniprep preparation for sequencing
- Generation of transgenic lines and sexing (male/female identification)
- Screening of transgenic lines
- Crossing of transgenic lines with Gal4-Actin line and selection of F1 progeny

- Preparation of insecticide test bottles and papers
- Bioassay performance and data analysis

3. Scientific rationale

Despite significant advances in vector genomics, a major bottleneck remains the limited capacity for experimental validation of candidate genes identified through omics and surveillance studies. This workshop directly addresses this gap by equipping participants with practical expertise in functional genomics tools that enable causal inference between genotype and phenotype in disease vectors.

4. Objectives

The specific objectives of the workshop are to:

- Strengthen Cameroonian capacity in experimental functional genomics and gene characterization
- Provide intensive hands-on training in transgenesis
- Enhance competence in experimental design for gene function studies in vectors
- Promote the establishment and consolidation of functional genomics platforms within Cameroonian institutions
- Foster a new generation of researchers capable of translating molecular insights into vector control strategies

5. Target participants

The workshop is designed for early- to mid-career researchers, including:

- PhD candidates
- Postdoctoral fellows
- Early-career investigators

Participants should be affiliated with universities, research institutes, or public health laboratories and engaged in research related to molecular biology, genetics, biochemistry, entomology, parasitology, biotechnology, or allied biomedical sciences.

6. Institutional eligibility

Applications are encouraged from institutions that:

- Demonstrate a strong strategic interest in functional genomics and gene characterization
- Are actively seeking to establish or strengthen functional genomics platforms

- Currently possess limited hands-on expertise in advanced functional genomics methodologies
- Are engaged in research on vector-borne diseases or molecular mechanisms of disease transmission

7. Eligibility criteria

Applicants must:

- Possess a background in molecular biology, genetics, biochemistry, biotechnology, entomology, or a related discipline
- Be actively involved in research on vectors or infectious diseases
- Demonstrate strong motivation to integrate functional genomics tools into their research programmes
- Possess sufficient English language proficiency, as the workshop will be conducted entirely in English

8. Application requirements

Applicants are required to submit:

- A detailed curriculum vitae (CV)
- A motivation letter (1–2 pages) outlining research interests and relevance
- A brief description of current research activities
- At least one recommendation letter

9. Selection process

A total of ten (10) candidates from across Africa will be selected based on the selection profile document. Selection will be guided by:

- Scientific merit and relevance of the applicant's research
- Demonstrated motivation and potential for applying functional genomics tools
- Institutional readiness and long-term capacity development potential
- Geographic representation and gender balance considerations

10. Language

The workshop will be conducted entirely in English. Participants must therefore demonstrate sufficient proficiency to actively engage in scientific discussions, practical sessions, and collaborative activities.

**11. Venue and duration**

Centre for Research in Infectious Diseases (CRID), Cameroon, Yaoundé.

Address: Yaoundé-Cameroun, Nkoulou-Carriere, Carrefour SIL. P.O. Box 13591.

Date: 19–21 August 2026.

Duration: 3-day intensive training workshop in functional genomics.

12. Application deadline and submission

Application deadline: 13 August 2026.

Award notification: 14 August 2026.

13. Contact for any questions

If you have any questions, please contact us at: crid@crid-cam.net

** No travel award or accommodation will be provided.*