



Pascal Mahukpe Ayelo

Date of birth: 12/11/1988 | **Nationality:** Beninese | **Gender:** Male |

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Address: Department of Entomology, AgriLife Research, Texas A&M University, College Station, United States (Work)

● EDUCATION AND TRAINING

15/09/2021 Pretoria, South Africa

DOCTOR OF PHILOSOPHY (PHD) IN ENTOMOLOGY – Faculty of Natural and Agricultural Sciences, Dpt.: Zoology and Entomology, University of Pretoria

03/2016 Abomey-Calavi, Benin

MASTER OF SCIENCES (MSc) IN PLANT PROTECTION / SUSTAINABLE PEST MANAGEMENT AND USE OF BIO-PESTICIDES – Faculty of Agronomic Sciences (FSA), University of Abomey-Calavi

● WORK EXPERIENCE

01/01/2023 – CURRENT College Station, United States

POSTDOCTORAL RESEARCH ASSOCIATE – DEPARTMENT OF ENTOMOLOGY, TEXAS A&M UNIVERSITY

Efficacy of plant-growth promoting rhizobacteria (PGPR)
Chemically-mediated plant-microbe-insect interactions
Neurobiology in parasitic wasps
Plant health monitoring using sensors

03/2022 – 10/2022 Abomey-Calavi, Benin

RESEARCH ASSISTANT – LABORATORY OF AGRICULTURAL SCIENCES, FACULTY OF AGRONOMIC SCIENCES, UNIVERSITY OF ABOMEY-CALAVI

Main tasks: Co-responsible of laboratory activities; Co-Supervision of bachelor and master students on research related to integrated pest management (IPM), preference and performance, and chemically-mediated interactions between host plants and their herbivores; Part-time teaching.

17/09/2017 – 15/09/2021 Nairobi, Kenya

PHD SCHOLAR / ARPPIS DAAD – INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY (ICIPE) AND UNIVERSITY OF PRETORIA

Research Topic: Identification of kairomones for the biological control of *Tuta absoluta* (Meyrick) and *Trialeurodes vaporariorum* (Westwood), two major pests of tomato *Solanum lycopersicum* L.

Skills gained: Excellent skills in chemical analyses using GC and GC-MS, and in insect electrophysiology and electroantennogram using GC-EAD. Very good skills in observation of insect behaviours, in formulation and optimization of active chemical blend lures, and in optimal use of lures under field conditions to recruit and retain natural enemies for a better biological control. Fundamental knowledge in biological control and integrated pest management (IPM) strategies, and in chemically-mediated tritrophic plant-insect-natural enemy interactions. Excellent skills in reading literature, writing research articles, designing and addressing research questions. Very good skills in field samplings of insects and insect rearing. Good skills in statistics and multivariate analytical techniques using R software. Excellent team-work attitude.

Research funded by: DAAD, ANR-CIRAD, Biovision Tuta IPM, NRF.

01/07/2016 – 17/08/2017 Cotonou, Benin

RESEARCH CONSULTANT – INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE (IITA)

Role: Co-responsible of laboratory and field research activities in "Fruit Fly Section"

Specific tasks: Investigation of oviposition preference choices of fruit fly species (*Bactrocera dorsalis*, *Ceratitis capitata* and *Ceratitis cosyra*) and their parasitoids (exotic, *Fopius arisanus* and native, *F. caudatus*) for wild and cultivated host fruits. Assessment of interspecific competition between both parasitoid species by observing their behavioural activities. Co-responsible in supervising two bachelor students who conducted their research activities in our laboratory.

04/05/2015 – 30/06/2016 Cotonou, Benin

MASTER STUDENT – INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE (IITA) AND UNIVERSITY OF ABOMEY-CALAVI (UAC)

Research Topic: Preference and performance of the parasitoid wasp *Fopius arisanus* (Hymenoptera: Braconidae) for fruit fly species and vegetable fruits under laboratory and semi-field conditions

Specific objectives: Evaluate the parasitism preference of *Fopius arisanus* for host fruit flies (*Bactrocera dorsalis*, *Ceratitis cosyra* and *C. capitata*)-infested vegetable fruits (tomato, zucchini and sweet pepper). Determine whether the interaction between host fly and fruit species affect the parasitoid preference under semi-field conditions.

● ADDITIONAL INFORMATION

PUBLICATIONS

Top 3 cited publications (Insect Chemical Ecology Research)

Pascal M. Ayelo, Christian W. W. Pirk, Abdullahi A. Yusuf, Anaïs Chailleux, Samira A. Mohamed & Emilie Deletre (2021). Exploring the kairomone-based foraging behaviour of natural enemies to enhance biological control: A Review. *Frontiers in Ecology and Evolution*, 9:641974. <http://doi.org/10.3389/fevo.2021.641974>

Pascal M. Ayelo, Abdullahi A. Yusuf, Christian W. W. Pirk, Anaïs Chailleux, Samira A. Mohamed & Emilie Deletre (2021). Terpenes from herbivore-induced tomato plant volatiles attract *Nesidiocoris tenuis* (Hemiptera: Miridae), a predator of major tomato pests. *Pest Management Science*, 77:5255-5267. <http://doi.org/10.1002/ps.6568>

Pascal M. Ayelo, Abdullahi A. Yusuf, Christian W. W. Pirk, Samira A. Mohamed, Anaïs Chailleux & Emilie Deletre (2021). The role of *Trialeurodes vaporariorum*-infested tomato plant volatiles in the attraction of *Encarsia formosa* (Hymenoptera: Aphelinidae). *Journal of Chemical Ecology*, 47(2): 192-203. <http://doi.org/10.1007/s10886-021-01245-2>

NETWORKS AND MEMBERSHIPS

Membership in Scientific Societies African Association of Insects Scientists (AAIS)
Entomological Society of America (ESA) - International Society of Chemical Ecology (ISCE)

HONOURS AND AWARDS

Scholarship award German Academic Exchange Service (DAAD) PhD In-Country/In-Region Scholarship award for the African Regional Postgraduate Programme in Insect Science (ARPPIS) from September 2017 to February 2021. Funding no. 91672680 (€ 17,407 / year).

Travel grants

1. University of Pretoria Bursary fund to support university registration fee and others in 2020 (\$ 1,275).
2. International Centre for Agricultural Research and Development (CIRAD) funds granted to support travels to international trainings (PhD Insect Chemical Ecology Course; Short visit stay at University of Pretoria) and conference (ESA symposium in 2020) (€ 1,000 / year for three years, 2018 to 2020).
3. International Atomic Energy Agency (IAEA) travel grant to attend the 3rd TEAM Symposium in 2016 (air ticket and accommodations were directly provided).

STATEMENT

I hereby certify that the above-mentioned information is true and accurate.



Pascal M. Ayelo
