

NOVEL CONTRIBUTIONS OF DOCTORAL THESIS

1. General information

Full name: Sonexay RASPHONE

Thesis title: **Research on pepper varieties (*Piper* spp.) resistant to *Meloidogyne incognita* using molecular markers in Vietnam**

Major: Biology Code: 9420101

Advisors: Associate Professor PhD. Truong Thi Hong Hai

PhD. Nguyen Quang Co

School: Institute of Biotechnology, Hue University.

2. Contribution of thesis

2.1. Contribution in research and science

- Morphological and genetic characterisation of 39 pepper lines/varieties collected from black pepper cultivation areas in Vietnam.
- Identification of a SCAR marker (30 – 360F1R2) linked to *M. incognita* resistance in *Piper* spp.
- Characterisation of *P. nigrum* L. flowering and the possibility of hybridization between commercial varieties of *P. nigrum* L. and nematode resistant *P. divaricatum*.

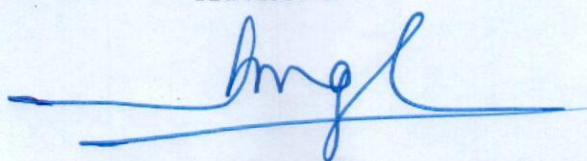
2.2. Contribution in practice

- Identification of *M. incognita* resistant and waterlogging tolerant *Piper* spp.: *P. hancei* (HUIB_PH30) and *P. divaricatum* (HUIB_PD36).
- Generation of grafts between HUIB_PH30 - Vinh Linh black pepper and *P. divaricatum* HUIB_PD36. The grafts are viable, resistant to nematodes, thrive well in greenhouse conditions.

These materials are important for creating disease-resistant black pepper plants, which is vital for the sustainable development of the black pepper industry in Vietnam.

Thua Thien Hue, January 23th, 2024

Advisor 1



Assoc.Prof. Dr. Truong Thi Hong Hai

Advisor 2



Dr. Nguyen Quang Co

PhD Candidate



Sonexay RASPHONE