Application for a: Outgoing Scheme NEWFELPRO Fellowship for experienced researcher Proposal Acronym: **EcoGVCC** Proposal Title: Ecology of an emerging grapevine virus in Croatia and California Research area(s): Life sciences LIF Research sub-disciplines: Applied life sciences - Ecology - Population biology - population dynamics - population genetics - Agriculture related to crop production Category of research: applied Duration in months: 16 Grapevine leafroll disease, Croatian autochthonous grapevine cultivars, population structure, next-generation sequencing, Keywords: vector transmission Grapevine is one of the most traditional agricultural crops in Croatia brought by Greek colonists. Today, the official Croatian Abstract: variety list includes 70 grapevine cultivars that are/or supposed to be autochthonous and represent national treasure. Beside good agronomic traits they are characterized by high virus infection rate and Grapevine leafroll-associated virus 3 (GLRaV-3) as the most common. GLRaV-3 has several genetically distinct groups which may differ in transmissibility by different mealybug vectors. The objectives of the proposal are: typing of Croatian autochthonous grapevine cultivars for an array of grapevine viruses, GLRaV-3 variant typing from autochthonous Croatian cultivars using next-generation sequencing technology, GLRaV-3 transmission trials in greenhouse conditions using vine mealybug (Planococcus ficus) as a vector. Mentioned will have significant impact and create prerequisites for further investigation of grapevine viruses and their ecology in Croatia.

Does this proposal possess any of the sensitive ethical issues detailed in ethical issues table?

No