



ACADEMIA DE ȘTIINȚE AGRICOLE ȘI SILVICE "GHEORGHE IONESCU-ȘIȘEȘTI"
INSTITUTUL NAȚIONAL DE CERCETARE-DEZVOLTARE PENTRU BIOTEHNOLOGII
ÎN HORTICULTURĂ ȘTEFĂNEȘTI ARGEȘ

Oras Ștefănești, Șos. București-Pitești, nr. 37, jud. Arges
Telefon: 0248/266838; Fax: 0248/266808; www.incdbh-stefanesti.ro
E-mail: incdbh.stefanesti_ro@yahoo.com; INCDBH.Stefanesti@asas.ro

Expression of interest

of National Research and Development Institute for Biotechnology in Horticulture Stefanesti-Arges, Romania to join a Consortium on HORIZON EUROPE calls

Destination 1: HORIZON-CL6-2024-BIODIV-07-1 Invasive alien species

Destination 2:

- HORIZON-CL6-2024-FARM2FORK-01-7 Impact of the development of novel foods based on alternative sources of proteins
- HORIZON-CL6-2024-FARM2FORK-02-5-two-stage: Animal nutritional requirements and nutritional value of feed under different production management conditions

Destination 5:

- HORIZON-CL6-2024-CLIMATE-01-1: Improving irrigation practices and technologies in agriculture

Organization details:

Country: Romania

Name of the organization: **National Research and Development Institute for Biotechnology in Horticulture Stefanesti-Arges (INCDBH Ștefănești)**

Contact person short description and contact details:

Contact person: Vizitiu Diana Elena, email: vizitiud@yahoo.com

<https://www.brainmap.ro/diana-elena-vizitiu>

<https://orcid.org/0000-0003-4286-7393>

<https://www.webofscience.com/wos/author/record/H-9596-2018> (Web of Science ResearcherID: H-9596-2018)

<https://www.researchgate.net/profile/Diana-Vizitiu>

<https://scholar.google.com/citations?user=yMRhLUsAAAAJ&hl=ro>

Vizitiu Diana Elena has the following expertise: the climatic factors influence on grapevine varieties; biodiversity (pests and flora) assessment and monitoring from grapevine plantations; obtaining plant extracts and testing them on horticultural plants; combating fungal diseases with plant extracts and nanostructured mixtures; management of the *Uncinula necator* pathogen using geographic information systems; *Agrobacterium tumefaciens* and *A. vitis* pathogenic bacteria

isolation and identification from galls, sap and soil; methods to prevent and limit the spread of crown gall in vineyards; hydric and biocenotic stress in viticulture; methods of producing virus-free viticultural planting material in protected spaces, *in vitro* cultures.

Short description of the organization

Having over 60 years of activity in horticultural research, INCDBH Ștefănești – Argeș:

- biodiversity (pests and flora) and climatic changes assessment and monitoring;
- alternative method utilization (with favorable impact on biodiversity) to combat pathogens and pests to ensure healthy horticultural productions;
- is the only one supplier of virus-free grapevine propagation material of the Initial category from Romania (G0);
- owns the national collection of grapevine virus-free germplasm;
- has breeding activity of horticultural species – table grapevine varieties, wine grapevine clones, tomato varieties;
- leads molecular biology research: the use of genetic markers to determine the degree of similarity and/or variability; uniformity and genetic stability by molecular methods;
- biotechnologies of *in vitro* regeneration in grapevines, ornamental, aromatic and medicinal plants, and species with restricted distribution areas;
- develops procedures for obtaining virus-free grapevine plants, innovative, precision technologies for horticultural species;
- makes research-development services in recognized laboratories: virological analyzes of grapevines; analyses to determine the physico-chemical parameters of grapes, must, wine and alcoholic beverages; analyses regarding the stability of wines (protein, tartaric, oxidative).
- is a supplier of table and wine grapes, must, and different types of wine through its own store.

In order to solve the major problems of agriculture, to create a durable agriculture in the context of climate change, the institute cooperation within research projects with research units (institutes, stations) of horticultural profile, agronomic universities and farmers from Romania.

Over time INCDBH Ștefănești has collaborated with various research organizations in Romania, such as: University of Pitești, National Institute for Research & Development in Chemistry and Petrochemistry, “Horia Hulubei” National Institute for Physics and Nuclear Engineering, Valahia University of Targoviste, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Research and Development Institute for Viticulture and Oenology Valea Calugareasca, Esri, Casa de Vinuri Ștefănești SRL (Marcea), Beia Consult International SRL.

Specific expertise relevant to the call topic

Team expertise

- Buciumeanu Elena-Cocuța
 - <https://www.brainmap.ro/elena-cocuta-buciumeanu>
 - <https://www.webofscience.com/wos/author/record/ITU-8452-2023> (Web of Science ResearcherID: ITU-8452-2023)
 - <https://orcid.org/0000-0002-3144-286X>
 - <https://www.researchgate.net/profile/Elena-Cocuta-Buciumeanu>

- <https://scholar.google.com/citations?hl=ro&authuser=1&user=GDE82XoAAAAJ>
- Guță Ionela-Cătălina
 - <https://www.brainmap.ro/ionela-catalina-guta>
 - <https://www.webofscience.com/wos/author/record/39354317> (Web of Science Researcher ID: C-5919-2012)
 - <https://orcid.org/0000-0002-9681-3844>
 - <https://www.researchgate.net/profile/Ionela-Guta>
 - <https://scholar.google.com/citations?user=y4iw5owAAAAJ&hl=en&oi=sra>
- Sărdărescu Ionela-Daniela
 - <https://www.brainmap.ro/ionela-daniela-sardaescu-toma>
 - <https://www.webofscience.com/wos/author/record/37675563> (Web of Science Researcher ID: AEG-1287-2022)
 - <https://orcid.org/0000-0002-3613-3812>
 - <https://www.researchgate.net/profile/Ionela-Sardaescu>
 - <https://scholar.google.com/citations?user=U7mVmzIAAAAJ&hl=en&oi=sra>
- Din Alin Constantin
 - <https://www.brainmap.ro/alin-constantin-din>
 - <https://www.webofscience.com/wos/author/record/36960953> (Web of Science Researcher ID: HHC-0737-2022)
 - <https://orcid.org/0000-0002-9562-7396>
 - <https://www.researchgate.net/profile/Alin-Din>
 - <https://scholar.google.com/citations?user=zIKQdXkAAAAJ&hl=ro>

Publication (selection)

- Vizitiu D.E., Tița A., Sărdărescu I.-D., Sumedrea D.I., Tomoiagă L.L., 2022, The diversity of insect species at ground level in the Ștefănești viticultural center, Scientific Papers. Series B, Horticulture, LXVI(1):383-388, Print ISSN 2285-5653, CD-ROM ISSN 2285-5661, Online ISSN 2286-1580, ISSN-L 2285-5653, IF 0, https://horticulturejournal.usamv.ro/pdf/2022/issue_1/Art57.pdf, WOS:000888877000057.
- Vizitiu D.E., Sărdărescu I.-D., Tița A., Buciumeanu E.-C., 2022, Seasonal abundance of insects from a vineyard in southern Romania, Horticultural Science (Prague), 49(1):52–58, <https://doi.org/10.17221/15/2021-HORTSCI>, IF 0.833, https://www.agriculturejournals.cz/publicFiles/15_2021-HORTSCI.pdf. WOS:000770068700003.
- Vizitiu D.E., Sardaescu D.-I., Fierascu I., Fierascu R.C., Soare L.C., Ungureanu C., Buciumeanu E.-C., Guta I.-C., Pandelea M.L., 2022, Grapevine Plants Management Using Natural Extracts and Phytosynthesized Silver Nanoparticles. Materials 15(22):8188, IF 3.748, <https://doi.org/10.3390/ma15228188>. WOS:000887359200001.
- Radomir A.-M., Stan R., Pandelea M.L., Vizitiu D.E., 2022, *In vitro* multiplication of *Mentha piperita* L. and comparative evaluation of some biochemical compounds in plants regenerated by micropropagation and conventional method. Acta Sci. Pol. Hortorum Cultus, 21(4):45–52, IF 0.695, <https://doi.org/10.24326/asphc.2022.4.5>. WOS:000861376700005.
- Vizitiu D.E., Dincă L., Donici A., Enache V., 2020, The management of soils from viticultural plantations. Scientific papers series Management, Economic Engineering in Agriculture and Rural Development, 20(1):619-624, PRINT ISSN 2284-7995, E-ISSN 2285-3952, IF 0, http://managementjournal.usamv.ro/pdf/vol.20_1/Art76.pdf. WOS:000521743100076.

- Vizitiu D.E., Dinca L., Murariu G., Ciobotea C.M., Georgescu L.P. 2020, Analysing the phenological phases of the main grapevine varieties from Stefanesti viticultural centre, Romania in order to improve their management. Journal of Environmental Protection and Ecology, 21(1):95-105, IF 0,507. WOS:000531885700012.
- Vizitiu D.E., Mazăre A.-G., Buciumeanu E.-C., Tița A., Anghel G., 2020, Methods and systems for detecting water stress in viticulture, Analele Universității din Craiova, Vol. XXV (LXI), p. 235-240, Editura Universitaria Craiova, ISSN 1453-1275, https://horticultura.ucv.ro/horticultura/sites/default/files/horticultura/Reviste/Analele/anale_fh_20_20.pdf.
- Ungureanu C., Calinescu M., Ferdes M., Soare L., Vizitiu D., Fierascu I., Fierascu R.C., Raileanu S., 2019, Isolation and cultivation of some pathogen fungi from apple and grapevines grown in Arges county, Rev.Chim. (Bucharest) 70:11:3913-3916, ISI IF 1,755, ISSN Online 2668-8212, <https://doi.org/10.37358/RC.70.19.11.7671>. WOS:000503185300028.
- Buciumeanu E.-C., Murariu G., Dincă L., Vizitiu D.E., Georgescu L.P., 2019, The influence of climatic factors on the main phenological phases of grapevines from Stefanesti Viticultural Center, Romania. Rom Biotechnol. Lett. 2019; 24(6):1055-1060, ISSN print: 1224-5984, ISSN online: 2248-3942, IF 0.765, <https://www.e-repository.org/rbl/vol.24/iss.6/17.pdf>, WOS:000505596100017
- Vizitiu D.E., 2016, The effect of treatments with garlic tincture on crown galls of grape, Romanian Biotechnol. Letters, Vol. 21, (1):11257-11261, Factor de impact: 0.765, ISSN: 1224-5984, <http://www.rombio.eu/vol21nr1/22A4.pdf>. WOS:000371434300022
- Rădulescu I., Vizitiu D.E., Bejan C., 2014, The substrate influence on intensity and quality mineral nutrition of grapevines cuttings, Initial Material G1, Annals of the University of Craiova - Biology, Horticulture, Food Produce Processing, Technology, Environmental engineering Series, Volume XIX (LV), p. 299-306, ISSN 1453-1275, <https://horticultura.ucv.ro/horticultura/sites/default/files/horticultura/Reviste/Analele/2014/journal-full-text.pdf>.
- Rădulescu I., Vizitiu D.E., Bejan C., 2013, New aspects concerning rooting substrates influence on growth and development of grapevine cuttings in protected spaces, Annals of Craiova University, Vol. XVIII (LIV), 281-288, ISSN 1453-1275 Craiova Universitaria Publishing house, https://horticultura.ucv.ro/horticultura/sites/default/files/horticultura/Reviste/Analele/2013/anale_2013.pdf.

National projects (the last 3 years)

- 445 PED Management of *Uncinula necator* pathogen using geographical informatic systems (2020-2022), <https://incdbh-stefanesti.ro/cercetare/proiecte/proiect-445ped-2020/>.
- ADER 7.1.4 Assessment of the vulnerability of the viticultural ecosystem to the harmful impact of competing and antagonistic organisms, in order to develop and implement new phytosanitary control technologies adapted to biotic and abiotic stressors with low impact on the environment, (2019-2022), <https://incdbh-stefanesti.ro/cercetare/proiecte/ader-7-1-4/>.
- P.S. 2.1.2 Research on food products fortified with functional ingredients obtained from wine byproducts, (2019-2020), <https://incdbh-stefanesti.ro/cercetare/proiecte/ps-2-1-2/>.
- NUCLEU Program PN 19 30 - Biotechnologies for obtaining and controlling the genetic resources of horticultural plants, (2019-2022), <https://incdbh-stefanesti.ro/cercetare/proiecte/pn-19-30/>.
- PN-III-P1-1.2-PCCDI-2017-0332/6PCCDI Increasing the institutional bioeconomic research capacity for innovative exploitation of local plant resources to obtain horticultural products with high added value, project responsible for Partener 2 - INCDBH (2018-2021), <https://incdbh-stefanesti.ro/cercetare/proiecte/6-pccdi/>:

- Project 1: Complex electronic system for monitoring the conditions of hydric and biocenotic stress with intelligent data processing algorithms to warn and prevent it in horticulture (2018-2021);
- Project 2: Multi-sensorial quantification of hydric and biocenotic stress in horticulture through phytomonitoring and early warning under the climatic changes conditions (2019-2021);
- Project 3: Development of vegetal extracts and innovative phytosynthetic nanostructured mixtures with phytotherapeutic applications in order to diminish biocenotic stress in horticultural crops (2018-2021).
- Complex Project PN-III-P1-1.2-PCCDI-2017-0323 / 5PCCDI Use of Gamma irradiation in biotechnological processes with applications in bioeconomics (BIO-GAMMA), <https://incdbh-stefanesti.ro/cercetare/proiecte/5pccdi/>:
 - Project 5: Stimulation by gamma irradiation of the ability to produce bioactive compounds in medicinal plants (2018-2020).

Patent application

- Vizitiu D.E., Şandric I., Sărdărescu I.-D., Experimental model for *Uncinula necator* pathogen spatial and temporal forecasting, patent application A00711/10.11.2022.
- Fierascu I., Fierascu R.C., Fistos T., Soare L.C., Ungureanu C., Vizitiu D.E., Natural fungicidal composition for combating grapevine downy mildew and method of obtaining it, patent application A00073/2020, page 13
https://osim.ro/wp-content/uploads/Publicatii-OSIM/BOPI-Inventii/2021/bopi_inv_08_2021.pdf.
- Fierăscu I., Fierăscu R.C., Fistoş T., Soare C.L., Ungureanu C., Vizitiu D.E., Drăghiceanu O.A., Păunescu A., Ecological antifungal composition for controlling phytopathogenic strains affecting the grapevine and the method of obtaining it, patent application A00158/12.03.2019, page 15 -https://osim.ro/wp-content/uploads/Publicatii-OSIM/BOPI-Inventii/2020/bopi_inv_09_2020.pdf.

Links

Organization webpages: <https://incdbh-stefanesti.ro/>

Technologies – Plant Protection – Virology in Horticulture

- <https://incdbh-stefanesti.ro/cercetare/laboratoare-de-cercetare/tehnologii-protectia-plantelor-virologie-in-horticultura/>
- <https://eertis.eu/erlb-2300-000e-0198>