



Agricultural Academy in Bulgaria



Institute of Ornamental and Medicinal Plants (IOMP) - Sofia



Institute of Ornamental and Medicinal Plants (IOMP) is a part of the Agricultural Academy in Bulgaria.

IOMP is the only one research institute in Bulgaria that is specialized in ornamental plant research.

IOMP conducts flexible basic and applied research to meet the needs of modern floriculture by implementation of nowadays technologies.



HISTORY

- ❖ **The beginning was made in 1963** when an **Experimental Station for Floriculture and Ornamental Horticulture** was established in Negovan, Sofia.
- ❖ **In 1986** it grew into the **Institute of Floriculture** - Negovan, Sofia
- ❖ **Since 2018**, the research activity includes a new topic - Medicinal plants - since then the institute has been renamed the **Institute of Ornamental and Medicinal Plants - Sofia (IOMP - Sofia)**

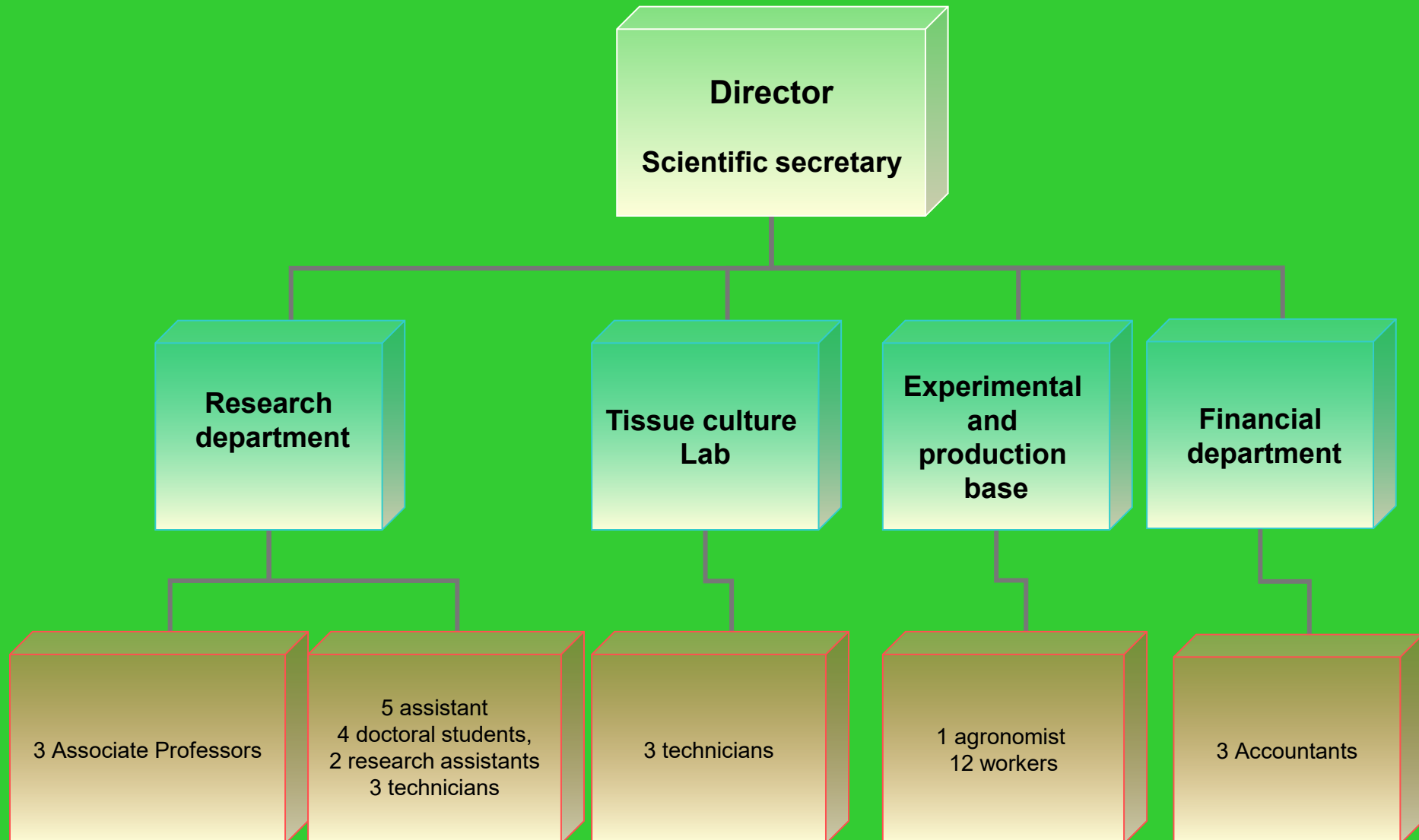


IOMP comprises a staff of 30 people;

- 3 associate professors,**
- 5 assistant ,**
- 4 doctoral students,**
- 3 research assistants,**
- technicians,**
- accountants**
- supporting staff**



Organization structure



IOMP facilities include:

- equipped tissue culture lab,
- 0.05 ha heated greenhouse,
- 0.2 ha glasshouses,
- 0.2 ha plastic greenhouses
- 30 ha open field



обработваема земя



адаптационна оранжерия



стоманено-стъклена оранжерия



лаборатория по тъкани култури



култивационно помещение



Research directions

- ❖ Breeding
- ❖ Selection
- ❖ Introduction
- ❖ In vitro propagation
- ❖ Growing technologies for new created cultivars
- ❖ Maintaining of collections of wild ornamental and medicine species from World and Bulgarian flora
- ❖ Study of the adaptive potential and study of the biological and decorative qualities of flower crops with healing effect.
- ❖ Study of the chemical composition of essential oils from medicinal and ornamental plants and their effect on the development of phytopathogens, their antibacterial action and antioxidant capacity



By combining modern and conventional breeding methods, the breeding programme at IOMP resulted in creation of a number of cultivars:

Spray carnation (D. caryophyllus f.spray) – 12

Chrysanthemum (Chr. morifolium Ram.) – 4

Lily (Lilium sp.) – 5

Gladiolus sp.- 3

Dahlia (D. variabilis Hort.) – 3

Tagetes (T. patula) - 1



Spray carnation (*D. caryophyllus* f.spray)



1.cv.Yanita

2.cv.Feya

3. cv.Naslada

4.cv.Niki

5.cv.Regina

6.cv.Krasina

7.cv.Biliana





cv. Rossitsa



cv. Elmaz



cv. Ira



cv. Sofia



Chrysanthemum (*Chr. morifolium* Ram.)



Lily (Lilium sp.)



cv. Andross



cv. Marina



cv. Polly



cv. Negovan



cv. Anna-Maria



Gladiolus sp.

Desi



Katerina



Iva



Dahlia (D. variabilis Hort.)



Tagetes (T. patula)



cv. Usmivka



Growing technologies

The institute has also developed technologies for growing of spray carnation, lily, gladiolus and gypsophila as well as technologies for *ex situ* cultivation of wild species from family *Plumbaginaceae*.



Tissue culture laboratory

The laboratory for applied tissue culture research performs optimization and elaboration of protocols for micropropagation of new and traditional for the country ornamental species and cultivars annual, perennial, potted flowering and leafy ornamentals and medicinal plants.







Gypsophila



D. caryophyllus f. spray

Chrysanthemum

Lilium



Torenia



Petunia



IOMP maintains rich *in vivo* and *in vitro* collections of Bulgarian and foreign varieties and species:

- spray carnations;
- chrysanthemums;
- lilies;
- gladioli;
- roses;
- dahlias;
- annual flowers;
- perennial flowers;
- potted plants;
- ornamental shrubs;
- wild species of carnation and endangered species of fam. genus *Limonium* and *Goniolimon*.





Plumbaginaceae: *Limonium* and *Goniolimon*



P. suffruticosa



Iridaceae



PERENNIAL FLOWERS



Chrysanthemums



Gladiolus



Dahlia



Lilies



Annual flowers





Pot plants



Medecine plants



IOMP works in cooperation with other Bulgarian research institutes from Agricultural Academy and Bulgarian Academy of Sciences, with University of Sofia “St. Kliment Ohridski”, Agricultural University – Plovdiv and University of Forestry- Sofia

Projects are financed by Bulgarian and international funds, including EC FP5 and FP6, COST Actions, bilateral international projects, projects supported by the Bulgarian Ministry of Education and Science, Ministry of Environment and Waters, Agricultural Academy, etc.



RESEARCH PROJECTS

Financed by the Agricultural Academy of Bulgaria:

Project № ZEMDKT 18 Maintenance, enrichment and study of genetic resources of ornamental and medicinal plants, innovative solutions in breeding technology and their application (2022-2025)

Project №. ZEMDKT2 "Biological, physiological and agrotechnical research in connection with the optimization of technologies for growing ornamental and medicinal plants and study the response to stress (2020-2022)

Innovative divisions for preservation of biodiversity and development of new cultivars and technologies for ornamental plants with improved resistance to stress factors” (2017-2019).

Preservation of biodiversity, improvement of cultivar diversity, optimization of technologies for cultivation and testing the reaction of ornamental plants to stress factors” (2014-2016).

Investigation of the adaptive potential and application of advanced research approach for improving the quality of ornamental plants at conditions of stress impact” (2011-2013).



Financed by external organizations

- Project financed by PUDOOS, Ministry of Environment and Waters in Bulgaria: “Inventory, condition of native habitats and *ex situ* cultivation of rare and threatened species from fam. *Plumbaginaceae*” (2011-2014).
- Project financed by PUDOOS, Ministry of Environment and Waters in Bulgaria: “Monitoring and and preservation of the protected wild spicies *Lilium Rhodopaeum* Delip., *L. Jankae* Kern. and *L. Albanicum* Griseb. In Bulgaria” (2004-2008).



Current research projects

Project № ZEMDKT 26 MAINTENANCE, ENRICHMENT OF THE GENE FUND AND TECHNOLOGICAL SOLUTIONS FOR GROWING ORNAMENTAL AND MEDICINAL PLANTS *Term: 2026-2029*

Project leader: Assoc. prof. dr. Nadejda Zapryanova

The project funded by the Agricultural Academy of Bulgaria.
The research work is carried out in 4 topics with 20 experimental tasks and 10 subtasks.



For the last decade the research at IOMP resulted in approximately 280 publications in outstanding international scientific journals and books, in Bulgarian scientific journals, conference proceeding and in other scientific issues.

IOMP is accredited for education of PhD students with specialty in Ornamental Plants (code 04.01.19).



Extension Service

To meet the needs of practice, an Extension Service at IOMP is operating to provide advices to growers and amateurs in plant protection, fertilization, post-harvest measures, rooting substances, growing technologies, to supply with seed and planting material; organization of open days, training courses in floriculture, seminars, participation in agricultural fairs and exhibitions, etc. The Extension Service develops contract projects for internal decoration, private and urban landscaping.



Flower exhibition FLORA /autumn/ - Sofia



Enyov Day -The day of medicinal plants and herbs - June 24



The day of magic, the sun and the healing power of herbs in Bulgaria - a special day in the Bulgarian national calendar. It is believed that on this day various herbs and herbs have the greatest healing power, especially at sunrise.





Agriculture's day – october 25





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THANK YOU FOR THE ATTENTION !