УКРАЇНСЬКЕ ТОВАРИСТВО ГЕНЕТИКІВ І СЕЛЕКЦІОНЕРІВ ІМ. М.І. ВАВИЛОВА

VAVILOV SOCIETY OF GENETICISTS AND BREEDERS OF UKRAINE

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№ ____

27 December 2023

Information letter 1

Dear colleagues!

On behalf of Vavilov Society of Geneticists and Breeders of Ukraine (VSGBU) we are pleased to invite you to the **XIX International Scientific Conference «Factors in Experimental Evolution of Organisms»**, dedicated to the 180th anniversary of the birth of Friedrich Miescher, the 185th anniversary of the cell theory, and the 145th anniversary of the birth of V. Ya. Yuriev. The conference will be held in **September 2024** in **Ternopil** (Ukraine) at **Ternopil Volodymyr Hnatiuk National Pedagogical University**. The date and format of the conference will be specified in the Invitation letter 2. The co-organizers of this event are VSGBU and Ternopil Volodymyr Hnatiuk National Pedagogical University.

The work of the Conference will cover the ***following areas***:

1. **Genome Evolution in Nature and in Experiment**
2. **General and Population Genetics**
3. **Molecular Genetics and Genomics**
4. **Applied Genetics and Breeding**
5. **Human Genetics and Medical Genetics**
6. **Analysis and Evaluation of Genetic Resources**
7. **Molecular and Cell Biotechnologies**
8. **Ecological Genetics**
9. **Bioinformatics and Computer Biology**
10. **History of Biology, Issues of Teaching Genetics, Selection and Evolutionary Theory**

International Committee of the Conference:

Kunakh V.A. – Dr. Sc. Biol., Corresponding Member of the NAS of Ukraine, Kyiv, Ukraine (Chairman)
Buyak B.B. – Dr. Sc. Phil., Corresponding Member of the NAPS of Ukraine, Ternopil, Ukraine (co-Chairman)
Drobyk N.M. – Dr. Sc. Biol., Prof., Ternopil, Ukraine (Deputy Chairman)
Blume Ya.B. – Dr. Sc. Biol., Academician of the NAS of Ukraine, Kyiv, Ukraine (co-Chairman)
Golubenko A.V. - Ph.D., Kyiv, Ukraine (Secretary)
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Fedak G. – Dr. Sc. Biol., Prof., Ottawa, Canada
Fedorenko V.A. – Dr. Sc. Biol., Prof., Lviv, Ukraine
Hasterok R. – Dr. Sc. habil. Biol., Prof., Katowice, Poland

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Kornelyuk O.I. – Dr. Sc. Biol., Corresponding Member of the NAS of Ukraine, Kyiv, Ukraine
Kovtun S.I. – Dr. Sc. Agr., Academician of the NAAS, Kyiv region, Ukraine
Kuchuk N.V. – Dr. Sc. Biol., Academician of the NAS of Ukraine, Kyiv, Ukraine
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Rashal I.D. – Dr. Sc. Biol., Academician of the Latvian Academy of Sciences, Salaspils, Latvia
Satarova T.M. – Dr. Sc. Biol., Prof., Dnipro, Ukraine
Sidorov V.A. – Dr. Sc. Biol., Corresponding Member of the NAS of Ukraine, Kyiv, Ukraine – United States
Sokolov V.M. – Dr. Sc. Agr., Corresponding Member of the NAAS of Ukraine, Odessa, Ukraine
Volkov R.A. – Dr. Sc. Biol., Prof., Chernivtsi, Ukraine
Volkova N.E. – Dr. Sc. Biol., Odessa, Ukraine
Yemets A.I. – Dr. Sc. Biol., Corresponding Member of the NAS of Ukraine, Kyiv, Ukraine

Organizing Committee:

Kunakh V.A. – Dr. Sc. Biol., Corresponding Member of the NAS of Ukraine, Kyiv (Chairman)
Buyak B.B. – Dr. Sc. Phil., Corresponding Member of the NAPS of Ukraine, Ternopil (co-Chairman)
Drobyk N.M. – Dr. Sc. Biol., Prof., Ternopil (Deputy Chairman)
Golubenko A.V. – Ph.D., Kyiv (Secretary)
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Bilyavska L.H. – Dr. Sc. Agr., Prof., Poltava
Herts A.I. – Ph.D., Associate Prof., Ternopil
Hrytsak L.R. – Dr. Sc. Biol., Ternopil
Humeniuk H.B. – Ph.D., Associate Prof., Ternopil
Kolupaiev V.Ie. – Dr. Sc. Biol., Kharkiv
Konvaliuk I.I. – Ph.D., Kyiv
Kovtun S.I. – Dr. Sc. Agr., Academician of the NAAS of, Kyiv region
Kozub N.O. – Dr. Sc. Biol., Kyiv
Kryzhanovska M.A. – Ph.D., Associate Prof., Ternopil
Melnyk V.M. – Ph.D., Kyiv
Morhun B.V. – Dr. Sc. Biol., Kyiv
Mozhylevska L.P. – Researcher, Kyiv
Nuzhyna N.V. – Ph.D., Kyiv
Opalko A.I. – Ph.D., Prof., Uman
Pirko Ia.V. – Dr. Sc. Biol., Kyiv
Pyda S.V. – Dr. Sc. Agr., Prof., Ternopil

Languages of the conference: Ukrainian, English.

All accepted materials will be published as a collection of research papers «Factors in experimental evolution of organisms» (*manuscript requirements see below*) prior to the beginning of the conference.

All materials submitted as research papers in Ukrainian or English language will be published in the periodical in the original language only after **prepayment**.

The publication fee is equivalent:

- for members of VSGBU from Ukraine – **700 hryvnias**,
- for members of VSGBU from other countries – **25 euros**,
- for participants, who are not members of VSGBU from Ukraine – **1000 hryvnias**,
- for participants, who are not members of VSGBU from other countries – **40 euros.**

Publication fee must be sent before **March 1**, **2024** on the operating account of VSGBU: Kyiv, AT Raiffeisen Bank Aval, MFO 380805, USREOU code 21 676 925, **IBAN UA38 3808 0500 0000**

0026 0012 4706 4 with the indication of **the first author's surname only**. Since VSGBU does not have a foreign currency account, foreign participants can transfer money to the treasurer of the VSGBU Society Twardovska Mariana Ostapivna by prior arrangement. Contact telephone of Twardovska M.O. – +38(097)4085337, *e-mail*: utgis.site@gmail.com, maryana.tvardovska@gmail.com.

The following materials should be sent to the Organization Committee by e-mail **faktory2016@gmail.com**:

- Manuscript (text of the paper with figures and tables) as a file in .**doc** or .**docx** format. The file name should contain the *first author's surname in Latin letters and the number of the section* (see above). *For example*, Bublyk_1.docx (first author Bublyk, section 1).
- Article layout with inserted figures and tables as a .**pdf** file. The file name should contain the *first author's surname in Latin letters with indication the section number* (scientific direction see above). *For example*, Bublyk_1.docx
- Figures as separate files must be colored (for online-version) and grayscale (for printed version) as a **.jpg** file. The file name should consist of the *first author's surname in Latin letters and number of figure* (scientific direction see above). *For example*, Bublyk_fig1.jpg (first author Bublyk, Figure 1).
- A scanned copy of payment receipt.

The **subject** of the e-mail message must include the first author's surname in English and the section number, *for example*, Bublyk_5.

Manuscripts received after March 1, 2024, or materials that do not meet the requirements (*see above*) **will not be accepted!** Please check all the materials before sending.

Address for correspondence: faktory2016@gmail.com.

DEAR COLLEAGUES! When sending articles and other documents, please carefully check the address you send them to (see above)!

Contacts:
+38(044)5260798 – Viktor A. Kunakh, Mariana O. Twardovska;
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The second Information letter will be sent in **June 2024**.

PLEASE NOTE that the second Information letter will be sent only to the **e-mail addresses provided by the authors** in the submitted manuscripts.

If you are planning to participate in the conference without publishing any materials, please inform the Organizing Committee about this by e-mail to faktory2016@gmail.com or by telephone call on the above listed numbers before **June 1st, 2024**.

Collection of research papers
«FACTORS IN EXPERIMENTAL EVOLUTION OF ORGANISMS»

ISSN 2415-3826 (Online), ISSN 2219-3782 (Print)

Collection of scientific papers **«Factors in Experimental Evolution of Organisms»**:

Included in the list of scientific professional publications of Ukraine, where the results of dissertations for obtaining PhD or DSc degrees in biological sciences can be published (biological specialties – 091, **Category "B"**, Order of the Ministry of Education and Science of Ukraine № 409 from 17.03.2020).

Included in the list of international scientific base **Index Copernicus (IC=65,08 (2023)).**

The language in which articles are published:

Ukrainian, English.

Guidelines for manuscript preparation:

1. The manuscript should be 5–7 A4 pages (297 x 210 mm) in length, including tables, illustrations and abstract. Set page margins to 30 mm left, 20 mm others.
2. **Font** – Times New Roman, 12 pt, single spaced, text justified, paragraph indent – 10 mm.
3. **Page numbering:** DO NOT number the pages.
4. The text of manuscript should begin with the **UDC** index.
5. After should be author(s) name (surname, initials), affiliation (institution), country, full address and ORCID of all co-authors (12 pt, *italics*), *see the example below*.
6. After the affiliation(s) address, write e-mail and phone number of the corresponding author, 10 pt, *italics*. The corresponding author in the list of authors should be marked by a superscript symbol (✉), *see the example below*.
7. **Title** of the article should be short (not more than 120 symbols, including the spaces), accurately reflecting the article content.
8. **Manuscript should be organized in the following order**: abstract (without heading), introduction (without heading), materials and methods, results and discussions, conclusions, references.
9. An identical **abstract** should be submitted in two languages – English and Ukrainian. Ukrainian abstract should be placed after the references. **Abstract** has to include the following sections: "Aims", "Methods", "Results", and "Conclusions" (*see the example below*). It should be **at least 1000 symbols,** but **not exceed 1500 symbols,** with spaces and punctuation marks, including the article title and **key words** or **phrases (not more than five)**.
10. **Abbreviations** should be defined at first mention and used consistently thereafter. *For example*, Carpathian biosphere reserve (CBR).
11. **Illustrations** (figures, photos, graphs etc.) must be embedded in text and also provided as separate **jpg** format files at 200–400 dpi at approximately the final size (Grayscale mode). In addition, authors may also submit files with color images for publication in the electronic version of the collection. Lettering must be in 12pt Times New Roman, the same font must be used throughout all figures in the paper (*see the example below*). Do not include figure legends in the image. Scale the figures to fit in the column width. The figures must be up to 80 mm (one column) or 180 mm wide (two columns) and not higher than 234 mm. If it is planned to use figures which were previously published by other authors, the author of the manuscript is obliged to indicate the author of the figure or provide a reference to its source, or documentary proof of permission to use these figures from the copyright owner.
12. **Tables**. Font for the text in the table should be Times New Roman, 11 pt, *see the example below.* **Notes for tables** must be provided below the table, in Times New Roman 10 pt. font. For example,

Note. M – molecular mass marker.

Notes: * callus-derived regenerants (primer A11), M – molecular mass marker.

The number of tables and figures together should not exceed 4-6!

13. **Information about financial support for the research and acknowledgements** should be included after the conclusions, in Times New Roman 10 pt. *italic* font.

14. **References.** Citations in the text must be in brackets. *For instance*, [1]. **Do not refer to unpublished materials. Avoid citation** of **dissertations and conferences proceedings.** It is desirable to cite papers published after 2010. Avoid excessive self-citation.

The list of references should be prepared in the following format and in English, and **listed in the order of their appearance in the manuscript**. For publications in Ukrainian, the names of the authors and the periodical title should be indicated as they appeared in the English version of the abstract or the contents of the periodical. The language of the original work should be indicated in square brackets (for example [in Ukrainian]). When there is no English title of periodical it should be transliterated into Latin alphabet according to the US Congress Library Standard. If a DOI (digital object identifier) is assigned to an article, include it at the end of the reference entry.

The **number of citstions** should not exceed **15** for **an experimental article** and **25** for **a review**.

Example of an article

UDC 631.52: 633.15: 631.67 (477.7)

VOZHEGOVA R.A.[1], LAVRYNENKO Yu.O.[1], MARCHENKO T.Yu.[1]✉, BASALIY V.V.[2]

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[1 line]

TITLE OF THE ARTICLE (in BOLD CAPITALS)

[1 line]

Abstract (in the language of the paper, without heading)

Introduction (without heading)

Materials and methods

Results and discussion

Conclusions

Information about financial support, acknowledgements (if any, without heading).

[1 line]

References

[1 line]

Abstract in English (if English is not the language of the paper, without heading)

Example of illustration

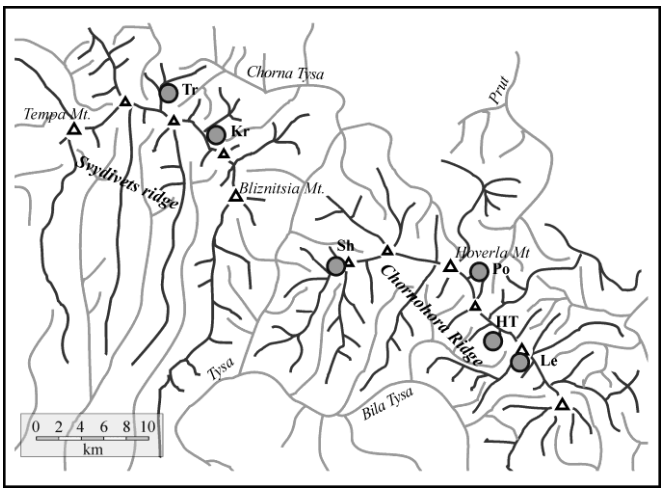

Fig. 1. Map of sampled populations of *G.lutea* in the Ukrainian Carpathians (represented by grayed circles). Kr – polonyna (mountain grassland) Krachuneska; Tr – the ridge slope between Troyaska and Tataruka Mountains; Sh – Sheshul and Pavlyk Mts.; Po – Pozhizhevska Mt.; HT – Hutyn Tomnatek Mt.; Le – polonyna Lemska.

Example of table

Table 1. Primers with the highest values of discriminating power (D_L) selected for the use in population genetic studies of *G. lutea*

	Primer	Rp*	D_L*	ND_{30}	Nt**	ND_{86} estimated	ND_{86} experimental
1	UBC#807	11.9	0.967	0	32	0	4
2	UBC#811	12.3	0.964	1	38	8.4	3
3	A18	7.7	0.956	5	21	42.0	52
4	UBC#840	7.2	0.953	5	23	50.4	21
5	A07	5.4	0.953	6	26	50.4	24
6	UBC#889	8.7	0.953	7	26	50.4	20
7	UBC#835	4.7	0.951	7	25	58.8	16
8	ERF-F	9.1	0.949	8	23	67.2	56
9	MYB	7.7	0.949	8	22	67.2	106
10	1962	6.1	0.949	8	17	67.2	58
11	B01	5.5	0.944	10	20	84.0	34
12	A19	7.3	0.942	11	18	70.2	28

Notes: * – value calculated for the sample of plants of two populations (n = 30); ** – value calculated for the sample of plants of six populations (n = 86).

Examples of references

▪ **Articles:**

- Gamelin F. X., Baquet G., Berthoin S., Thevenet D., Nourry C., Nottin S., Bosquet L. Effect of high intensity intermittent training on heart rate variability in prepubescent children. *Eur. J. Appl. Physiol*. 2009. Vol. 105. P. 731–738. doi: 10.1007/s00421-008-0955-8.
- Nikolaiev R. O., Vivcharyk M. M., Chernykh S. I., Tkachuk Z. Yu. Influence of oligoribonucleotides on the conformation and stability of interferon. *The Bulletin of Vavilov Society of Geneticists and Breeders of Ukraine*. 2019. Vol. 17 (2). P. 165–171. doi: 10.7124/visnyk.utgis.17.2.1217. [in Ukrainian]

▪ **Books, manuals:**

- Lersten N. R. Flowering plant embryology. Ames (USA): Blackwell Publishing, 2004. 212 p.
- Mel'nychuk M. D., Novak T. V., Kunakh V. A. Plant Biotechnology. Kyiv : Polihraf Konsaltyng, 2003. 520 s. [in Ukrainian]

▪ **Digital Sources** (if you have a doi, you do not need to provide a link to the Web address)**:**

- Hammerli M. Molecular aspects in systematics of *Gentiana* Sect. *Calathianae* Froel. (Doctoral dissertation). Neuchâtel, 2007. 99 p. Retrieved from: https://doc.rero.ch/record/8521/files/these_HaemmerliM.pdf.

▪ **Patents:**

- Drobyk N. M., Melnyk V. M, Hrytsak L. R., Leskova O. M., Kunakh V. A. Method of microclonal multiplication of *Gentiana lutea* L. and *Gentiana acaulis* L.: Patent for utility model 21499 Ukraine. No u200610671; applied on 09.10.2006, published on 15.03.2007, bulletin № 3.
- A way of *in vitro* rooting of *Carlina sirsioides* Klok. and *Carlina onorordifolia* Bess. ex Szaf., Kulcz. Et Pawl. plants: pat. 116640 Ukraine: MPK (2017.01) S12 N 5/00, 5/04 (2006.01); A 01 N 4/00. No u 2016 13335; appl. 26.12.2016; publ. 25.05.2017, Bul. No°10. 4 p. [in Ukrainian]

Example of abstract

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[1 line]

COMPREHENSIVE EVALUATION OF *IRIS PUMILA* L. POPULATIONS STATUS IN UKRAINE

Aim. *Iris pumila* L. (Iridaceae), typical steppe xerophyte, which is protected in several regions of Ukraine. Area of the species range has suffered a significant decline and fragmentation over the recent centuries. The comprehensive population studies were conducted to elucidate the effects of these processes and determine the indices that can be used as well-timed signals of species extinction risk. ***Methods***. Ecological and population studies were combined with ISSR-analysis of genetic diversity to characterize the populations of *I. pumila*. ***Results***. A number of population and ecological indicators suggests that *I. pumila* in Ukraine may be referred to regressive species threatened by genetic erosion. Moreover, the results of ISSR-analysis of plants from four populations in Mykolayiv and Poltava regions showed relatively high levels of the species genetic diversity and weak divergence of isolated populations. ***Conclusions***. The reduction and fragmentation of *I. pumila* habitat first of all is accompanied by decline in ecological and population indicators, but depletion of the populations' gene pool occurs much slower. To adequately determine the risk of genetic erosion in particular species, apart from assessment of population and ecological indicators, evaluation of species genetic resources using molecular markers is needed.

Keywords: genetic resources, *Iris pumila* L., population studies, PCR markers, threatened species.