

Katarina Borojević

CURRICULUM VITAE

1991.

NAME AND SURNAME: Katarina Borojević

DATE, PLACE OF BIRTH. November 17, 1928, Senta, Yugoslavia

SEX: Female

TITLE: Full professor

EDUCATION:

1952	Diploma in Agronomy and Plant Breeding, University of Zagreb, Croatia
1957	Special graduate student in Genetics, Cornell University, USA
1962	Ph.D. in Genetics, University of Zagreb, Croatia

APPOINTMENTS:

1952	Plant Protection Engineer, "Poljoopskrba", Zagreb, Croatia,
1954	Wheat Seed Production Engineer, "Seed Cooperative", Zagreb, Croatia,
1957	Instructor in Genetics, Faculty of Agriculture University of Novi Sad, Yugoslavia
1963	Assistant Professor in Genetics and Plant breeding University of Novi Sad,
1970	Associate Professor in Genetics and Plant Breeding University of Novi Sad,
1975-1992	Full Professor in Genetics, Faculty of Natural Sciences University of Novi Sad,
1965	Visiting scholar at North Carolina State University, Raleigh, NC, U.S.A.
1979	Visiting scholar at the University of California, Davis, CA, U.S.A.
1983-1992	Director of Research project "Genetic Engineering and Biotechnology", at the University of Novi Sad,
1988-1990	Director of the Institute of Biology, University of Novi Sad

RESEARCH WORK:

Has published 196 bibliographic units in the fields of genetics and plant

breeding dealing with:

1. The effect of different mutagenic agents on plant population, such as irradiation, radio-mimetic chemicals and herbicides as pollutants of the environment.
2. Selection methods of selffertilised plants
3. Genetic markers in wheat (biochemical and molecular markers)
4. Diploid and haploid *in vitro culture* in cereals.

According to the Citation index, Dr. Borojević's articles have been cited more than 100 times in various papers and books.

TEXT BOOKS:

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| 1974 | Genetika , 2nd ed., pp. 505, with Slavko Borojević (1st ed. 1971, pp. 456). This is a textbook on general genetics published in the Serbo-Croatian language. |
| 1991 | Geni i populacija , 2nd ed., pp. 556 (1st ed. 1986, pp. 546). This is a textbook for advanced students in genetics and plant breeding published in the Serbo-croatian language. |

LICENSES:

She is the author of four wheat cultivars and many mutant lines resistant to diseases and of high protein value, which are serving as parents in wheat breeding programs.

POSITIONS HELD IN PROFESSIONAL SOCIETIES AND ASSOCIATIONS:

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|-----------|---|
| 1970-1980 | Chairperson of the Genetics Society of Vojvodina, Yugoslavia |
| 1972-1976 | Chairperson of the Mutation and Polyploidy Section, European Association for research on Plant Breeding (EUCARPIA). |
| 1982-1986 | Councillor of the European Mutagenic Environmental Society (EEMS). |

HONORS:

- | | |
|------|--|
| 1961 | Annual Achievement Award of the City of Novi Sad, for genetic research in wheat |
| 1971 | Annual Achievement Award of the City of Novi Sad, for the text book, Genetika (with S. Borojević) |
| 1986 | Life Achievement Award in Science of the Republic of Serbia, Yugoslavia |

CITATIONS AND MEDALS:

- | | |
|------|--|
| 1979 | From the Institute for the Application of Nuclear Energy in Agriculture, Veterinary Medicine and Forestry, Zemun, Yugoslavia |
| 1984 | From the Faculty of Agriculture, University of Novi Sad, |
| 1985 | From the Faculty of Natural Sciences, University of Novi Sad |
| 1986 | From the Faculty of Agriculture, University of Osijek, Croatia |

TEACHING:

- Courses in genetics since 1957. Undergraduate courses at the University of Novi Sad.
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|-----------|---|
| 1957-1967 | Laboratory in General genetics at the Faculty of Agriculture (30 courses) |
| 1969-1976 | General Genetics & Plant breeding at the Faculty of Agriculture (12 courses) |

- 1974-1992 **General Genetics** at the Faculty of Natural Sciences (18 courses)
- 1963-1975 **Plant breeding** at the Faculty of Agriculture, Vinkovci, University of Osijek (5 courses)

POST-GRADUATE COURSES:

- 1970-1988 **Population and quantitative genetics**, Faculty of Agriculture, Novi Sad (16 courses)
- 1972-1985 **Human Genetics** at the Faculty of Medicine, Novi Sad, (6 courses)
- 1989-1991 **Mutation Genetics** (11 courses)
Population Genetics at the Faculty of Agricultural Sciences, University of Zagreb, (2 courses)
- 1969-1992 Mentor of 170 diploma theses in Genetics at the Faculty of Natural Sciences,

This represents 25% of all students who earned their degree in biology

MENTOR OF 7 MASTER THESES:

1. Ljiljana Vapa (1986): The appearance and maintenance of mutations in populations of wheat (*Triticum aestivum vulgare*) treated by radiomimetic chemicals.
2. Zora Jelčić, 1976. Leaf rust damage in populations of wheat after mutagenic treatments.
3. Dušan Adamović, 1978. Inheritance of induced resistance to *Puccinia recondita tritici* in wheat.
4. Milanko Stupar, 1978. Inheritance of the content of wheat protein in different genotypes after mutagenic treatments.

5. Jovan Joksimović, 1987. Comparison of induced mutations for resistance to *Puccinia recondita tritici* with resistance of LR lines.
6. Zoran Jerković, 1988. Identification of genes resistant to *Puccinia recondita tritici* in Novi Sad wheat varieties.

Member of 10 committees before which candidates defended their masters theses.

MENTOR OF 4 Ph. d. THESES:

1. Dr Nada Stajić, 1976. Daltonism in ethnic groups in Vojvodina.
2. Dr Ljiljana Vapa, 1983. Polymorphisms of proteins in wheat.
3. Dr Blaka Drušković (1984). Effect of environmental population on genetic material in plant populations.
4. Dr Stanislav Šesek, 1989. Regeneration of plants from anther culture in vitro of *Triticum aestivum L.*

Member of the 7 commity for Phd and Chairpeson for 3 before which: Phd theses vere defend.

SPECIALIZATION OF SCIENTIFIC CO-WORKERS: abroad srent by Katarina Borojević

1. Ljiljana Vapa: Genetic variabiliy of isozymes and nonenzymatic proteins, Italy 1971, Sweden 1977, India 1978, Germany 1978, Chechoslovakia 1982, USA 1980/81, 1985/86)
2. Erika Rak: Resistriction fragment length polymorphisms of DNA in wheat P.B.J. Cambridge. Great Britain 1987
3. Evica Rajčan Šeparović: Restriction lenght fragment polymorphisms of DNA. Great Britain 1986/87.
4. Stevan Petrović: Cytogenetics in wheat. Columbia University Mo. USA, 1987.

5. Stanislav Šesek: Anther cultures in wheat. Wageningen Holland 1981, USDA, USA 1987, 1991.

SCIENTIFIC CONFERENCES:

1963-1992 participant at the XI, XII, XIII, XIV, XV and XVI International Congress of Genetics (ICG), with contributed papers. Gave the invited paper: "Genetic changes in quantitative characteristics of irradiated populations of wheat", XII.I.C.G.sec. 25. Chairperson of section 21/32 at the XIV ICG. Was a member of the committee of the XV ICG.

Has participated in many international and domestic scientific conferences during which has given the opening address on 4 occasions and has chaired sessions 40 times.

Has organized 3 international scientific symposia held in Yugoslavia:

1. "Induced mutations for disease resistance in plants" FAO/IAEA meeting, Novi Sad 1973. Publication of IAEA, 1974.
2. Mutation and Polyploidy Section of European Association for Plant Research, 1976. Published in Genetika (Beograd) as Supplement Vol. 8, No. 2, and No. 3.
3. Symposium on Genetic Research. Genetic & Breeding Society of Vojvodina, 1980.;

PUBLIC LECTURES AND SEMINARS

Abroad

1. "The nature and utilization of mutation in plants". Cairo University, Cairo, Egypt, 1969.
2. "The effect of mutagenic treatments and its influence on evolution in plants". Egyptian Genetics Society, Cairo, Egypt, 1969.
3. "Effect of irradiation on quantitative traits of plants", Faculty of Medicine and Genetic

Society, Sant Yago, Chile, 1970.

4. "Genetic structures of populations of plants after mutagenic treatments". Seminar for postgraduate studies, Chapingo, Mexico, 1973.
5. "New trends in genetic research", Cairo University, Egypt, 1973.

"New trends in wheat breeding in N.Sad". Agronomy meeting, Nitra, Czechoslovakia, 1974.

"Genetic structures of populations after mutagenic treatments in wheat". Department of Agronomy, University of Missouri, Columbia, Missouri, 1975.
7. "Mutation and selection in irradiated wheat populations". Cornell University, Ithaca, N.Y. USA, 1975.
8. "Genetic structures of population in wheat after mutagenic treatments", Iowa State University, Ames USA, 1975.
9. "Induced variability in disease resistance", Hindu University, Varanasi, India, 1978.
10. "Radiation and evolutionary changes in plants". Kihara Institute, Tokio, Japan, 1978.
11. "Genotoxicity of herbicides in cereals", University of Oklahoma, Norman, OK USA, 1991.

In Yugoslavia

1966-1990 Has lectured at the following winter seminars: Society of Agronomy of Vydina, in Kupari and Vrnjačka Banja, Society of Agronomy of Croatia in Portorož and Dubrovnik; Society of Agronomy of Bosnia and Hercegovina, Neum; Seminars of Genetic Society of Vojvodina, Novi Sad; Genetic Society of Croatia iz Zagreb.

1954-1992.

Research Projects:

Katarina Borojević was principal investigator or coinvestigator in 10 domestic and 10 international research projects.

Domestic Research Projects:

1. "Analysis of factors influencing wheat production in villages in Slavonia" Seed cooperativ's union of Croatia, 1954-1957. (Principal investigator).
2. "Creation of high yielding varieties of wheat. Institute of agricultural Research, Novi Sad, 1858-1970. (Co-investigator - consultant in genetics).
3. "Induced mutations in plants" Faculty of Agriculture, Novi Sad 1957-1959. (Principal investigator)
4. Increasing production and processing of wheat. Institute for Crops and Vegetables Novi Sad 1970-1988. (Co-investigator- consultant in genetics).
5. "Induced mutation in plants. Institute of Biology, Novi Sad, & INEP Zemun, 1971-1975. (Principal investigator).
6. "Increasing of production of medical plants. Institute of Biology & Institute for Crops and Vegetables Novi Sad, 1979-1988. (Co-investigator).
7. "Investigation of changes of quantitative characters in wheat after irradiation. Institute for Agricultural Research, Institute of Biology and Institute for Application of Nuclear Energy in Agriculture, Veterinary and Forestry 1979-1984. (Co-investigator).
8. "Genetic aspects of environmental pollution". Institute of Biology 1988. (Principal investigator).
9. "Genetic and physiological research at the tissue and cell level in plants. Institute for Biology 1981-185. (Principal investigator).
10. "Genetic engineering & biotechnology". Institute of Biology, Institute of Chemistry, Faculty of Natural Sciences, Faculty of Technology and Faculty of Agriculture, Novi Sad, 1983-1985. and 1986-1990. (Principal investigator).

International Research Projects:

1. Effect of X-ray and thermal neutrons on Triticum species. Brookhaven National Laboratory USA. Agricultural Faculty N. Sad, 1957-1958. (Principal investigator).
2. Production and use of induced mutations in plant breeding. Agricultural Faculty Novi Sad, IAEA, Vienna 360/1965-1970 - (Principal investigator).
3. Induced mutation by radiation and chemicals (EI and EMS) Faculty of Agriculture, Novi Sad - IAEA Vienna. 360/CF/1965y-1970. (Principal investigator).
4. Isolation of mutants resistant to disease. Faculty of Agriculture Novi Sad, Institute of Biology Novi Sad - IAEA Vienna, 1031/Rb/1971/1983. (Principal investigator).
5. Genetic aspects of environmental protection, monitoring by plant systems. Institute of Biology Novi Sad, - EPA/SAD - JF 500/1984-1987. (Principal investigator).
6. Methods of genetic engineering in plants: Use of tissue culture for broadening and maintaining genetic variability in cereals and industrial plants. Institute of Field and Vegetable Crops, Institute of Biology Novi Sad, - USDA, USA IFP 630/1985-1991. (Principal investigator).
7. Determination of mutant genes. Institute of Biology Novi Sad - FAO-IAEA, Vienna (YU/5/027/1985-1991. (Principal investigator).
8. Alis Link No 246 promoting cultural, educational and technical cooperation between Great Britain and Yugoslavia. Genetics of induced resistance in cereals. Cambridge laboratory. (Co-operating program 1990-1993).
9. Fulbright program of cultural, educational cooperations USA - Institute for biology Novi Sad, 1985-1990. (Cooperative program).
10. Genetic aspects of environmental protection, monitoring by plant systems. Institute of Biology Novi Sad - EPA SAD: JF 957/1991-1993. (Principal investigator).

VISITING PROFESSORS AND SCIENTISTS

During the period 1975-1988, more than 30 visiting scientists from foreign institutes participated in projects at the laboratory of Genetics, and lectured at the University of

Novi Sad at the invitation of Dr. Borojević.

Of these, the following scientists made especially noteworthy contributions to the development of research and teaching.

1. 1977. Prof. dr Bruce Wallace
Department of Biology
Virginia Polytechnic Institute
and state University
Blacksburg, Virginia 24061
USA
Fulbright program

2. 1973. Dr Alexandar Micke
IAEA, Wagremerstrasse 5
POB 100
Vienna, Austria
FAO/IAEA program

3. 1984. Dr Harold Kibby
EPA, Environmental Research Laboratory
200 S.W. 35th Street
SCorvallis, Oregon 97333, USA
ESSPA/YU program

4. 1984. Dr Calvin O. Qualset
University of California
Genetic Resources Conservation Program
258 Hunt Hall
Davis, California 8895616, USA
Fulbright program

5. 1984. Proff. dr Gary E. Hart
Texas A&M University
Dept. of Soil and Crop Science
College Station
Texas 77843-2474, USA
Fulbright program
6. 1985. Dr Chuang, C., Ouyang T.
Institute of Genetics
Academia Sinica
Beijing, China
Adacemy of Science, Vojvodine
7. 1986. Dr Gideon W. Schaefer
USDA, Agricultural Research Service
Room 103, Bldg. 006 Barc-West
Beltsville, Maryland 20705, USA
USDA/YU program
8. 1986. Dr Gordon Kimber
University of Missouri
Department of Agronomy
Columbia, MO 65202, USA
USDA/YU program
9. 1986. Dr Frank C. Greene
Food Proteins Res. Unit
U.S. Dept. of Agriculture
Albany, California, USA
FAO/IAEA program
10. 1989. Dr Tomas Payne
CYMMIT, Mexico
Fulbright program
11. 1980,1992 Dr J. Gusgafsson
University of Missouri
Department of Agronomy
Columbia, MO 65202, USA

SCIENTIFIC COOPERATION WITH SCIENTIFIC ORGANIZATIONS IN
JUGOSLAVIA

1. Faculty of Agriculture, Institute of crops & vegetable crops, Novi Sad.
2. Faculty of Medicine, Novi Sad
3. Institute of Biology "Siniša Stanković" Beograd
4. Faculty of Agricultural Science Zagreb
5. Biotechnical Faculty, Ljubljana
6. Agricultural Faculty Beograd
7. Institute for Corn Zemun Polje

Last position and duties

Full professor in Genetics at the Faculty of Natural Sciences, University of Novi Sad, Yugoslavia; Director of the research project: Genetic engineering and biotechnology.

Teaching courses: "Genetics" and "Population Genetics" at the Faculty of Natural Sciences, University of Novi Sad, and "Mutation Genetics and Breeding" at the Faculty Agricultural Science, University of Zagreb. Head of the Genetics and Tissue Laboratory, Institute of Biology, University of Novi Sad.

Address:

Institute of Biology, Faculty of Natural Sciences, University of Novi Sad, Dositejeva 2, 21000 Novi Sad, Yugoslavia, tel. 21-58-927, fax. 21-59-995, home tel. 21-624-297.