

Helga Winge (1934-2023)



Helga Winge

Helga Winge was born on January 23, 1934 in Porto Alegre, RS, from a traditional floriculturist family. After secondary school education she started her BS in Biological Sciences at the Federal University of Rio Grande do Sul (UFRGS), where she graduated in 1956. She also did a specialization in Biology (1960-1962) at UFRGS. In 1971, she pursued her PhD degree in the same institution, under the supervision of the prominent Brazilian geneticist, Prof. Dr. Antonio Rodrigues Cordeiro.

Shortly after getting her BS she was invited to join the Department of Genetics at UFRGS as a Research Assistant and became an Assistant Professor (1970), Associate Professor (1977), and finally a Full Professor (1985) at the same institution. Temporarily, she was also an Assistant Professor at the University of Brasília (1964/65). In the years 1967/69 she was a Research Assistant at the Zoology Department, University of Wisconsin, USA. In 2003 she formally retired from UFRGS, but remained in the institution as a Guest Collaborator until 2006.

Helga Winge started her scientific career studying the evolution of the *Drosophila willistoni* as a model organism. Together with Professor Cordeiro, she published pioneering papers about the interspecific hybridization in the *D. willistoni* group of species. These publications had a strong impact in the community of Evolutionary Biology at that time, and the importance of Helga's findings was recognized by the scientific community many years later, by the naming of a new subspecies of *Drosophila willistoni* as *Drosophila willistoni winge*, in honor of Dr. Helga's scientific

breakthroughs (Mardiros et al., Fly 10: 162-171. Doi: 10.1080/19336934.2016.1197448, 2016).

In the 1970s, Helga changed the focus of her research to plants, initially the native Iridaceae "bibi" (*Alophia pulchella*), and then the "Briza" complex and some other genera of Poaceae (Gramineae), *Relbunium hypocarpium* (Rubiaceae), the native yerba mate (*Ilex paraguariensis*), as well as the cultivated (*Hordeum vulgare vulgare*) and native barley (*Hordeum stenostachys*). She later joined the research team on "Genetics, tissue culture and DNA transfer in plants", with emphasis on anther culture, androgenic process, and somatic embryogenesis in barley.

In addition to her brilliant career as a scientist, Dr. Helga was outstanding in teaching undergraduate and graduate students. Fourteen M.Sc. and four Ph.D. degrees were obtained under her guidance from 1971 up to 2003. She also participated in the university management as Coordinator of our Graduate Program in Genetics and Molecular Biology (1978/80), a member (1974/78) and Vice-Coordinator of the Biology Career Commission (1977/78), and as member of several collegiate bodies and commissions at UFRGS.

Helga Winge was President of the Regional Biology Council-3rd Region (1987/91), Vice-President (1988/90) and 2nd Secretary (1982/84; 1994/96) of the Brazilian Society of Genetics (SBG), and Advisor of the Brazilian Society for the Advancement of Science (SBPC) (1983/87; 1993/97). She was also very active in advisory committees or similar roles for

the Brazilian National Council for Scientific and Technological Development (CNPq), the Rio Grande do Sul State Foundation for the Development of Science (FAPERGS), and, occasionally, for institutions in Argentina and Uruguay.

Helga was a member of numerous national and international scientific societies and associations, such as the Brazilian National Academy of Sciences, the New York Academy of Sciences, the American Association for the Advancement of Science, the Botanical Society of America, the International Association for Plant Biosystematists, the International Association for Tropical Biology, the Argentinian Society of Genetics, and the Latin American Associations of Genetics and Botany.

Helga Winge is considered by the Brazilian National Council for Scientific and Technological Development (CNPq) as one of the pioneering women in Science in Brazil, and in 1981 she received the title of Commander of the Order of Merit of the Republic from the Brazilian Academy of History and Legion of Historical Merit, for her professional merit, honor, and dedication to Science. She also received the following honors: Silver Plate from the Biology Society of Rio Grande do Sul and Silver Plate from the Yerba Mate Industry Unions of Rio Grande do Sul, Santa Catarina and Paraná States.

Some of the main publications of Prof. Dr. Helga Winge are listed below:

Winge H, Napp M, Maciel CM and Marques EK (1961) Genetic effects of gamma radiation on natural populations of *Drosophila willistoni*. *Experientia* 17:406-408.

Winge H and Cordeiro AR (1963) Experimental hybrids between *Drosophila willistoni* Sturtevant and *Drosophila paulistorum* Dobzhansky and Pavan from Southern marginal populations. *Heredity* 18:215-222.

Winge H (1965) Interspecific hybridization between the six cryptic species of *Drosophila willistoni* group. *Heredity* 20:9-19.

Cordeiro AR and Winge H (1995) Levels of evolutionary divergence of *Drosophila willistoni* sibling species. In: Levine L (ed) *Genetics of natural populations: The continuing importance of The-*

odosius Dobzhansky. Columbia University Press, New York, NY, pp 262-280.

Porto ML, Mariath JEA, Detoni ML, Cavalli SS, Winge H and Ehrendorfer F (1977) New species of *Relbunium* (Rubiaceae) from Brazil, with notes on flavonoid and peroxidase patterns. *Plant Syst Evol* 128:177-193.

Sampaio MTS, Hickenbick CM and Winge H (1979) Chromosome number and meiotic behavior of South American species of the *Briza* complex (Gramineae). *Braz J Genet* 2:125-134.

Schifino MT and Winge H (1983) Karyotypes and nuclear DNA content of species of the *Briza* complex and some other genera of Poaeae (Gramineae). *Braz J Genet* 6:245-259.

Schifino MT and Winge H (1983) Circadian rhythms of mitotic divisions in seedling meristems of *Briza uniolae* (Nees) Steud. (Gramineae). *Braz J Genet* 6: 575-578.

Cavalli-Molina S and Winge H (1988) Phenetic relationships among populations of the autogamous plant *Relbunium hypocarpium* (Rubiaceae). *Braz J Genet* 11: 401-418.

Cavalli-Molina S, Motta VEP, Schiengold M and Winge H (1989) Identical isoenzyme patterns in sib plants of *Relbunium hypocarpium* (Rubiaceae). *Braz J Genet* 12:361-368.

Schiengold M and Winge H (1990) Similarity coefficient of Jaccard applied to studies on gene regulation. *Braz J Genet* 13:855-860.

Freitas LB, Cavalli Molina S and Winge H (1995) Sources of genetic variability of a cleistogamous Neotropical species, *Relbunium hypocarpium*, Rubiaceae. *Braz J Genet* 18:289-296.

Nonohay JS, Mariath JEA and Winge H (1999) Histological analysis of somatic embryogenesis in Brazilian cultivars of barley, *Hordeum vulgare vulgare*, Poaceae. *Plant Cell Rep* 18:929-934.

**Maria Helena Bodanese Zanettini
Vera Lúcia da Silva Valente Gaiesky
Departamento de Genética, IB, UFRGS
Porto Alegre, RS**