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Wheat Genetics Resource Center
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Curriculum vita

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Education:

B.S.	1974	Free University of Berlin
M.S.	1975	Free University of Berlin
Ph.D.	1977	Free University of Berlin
Habilitation	1986	Free University of Berlin

Professional experience:

Current: 1997- Research Professor, Department of Plant Pathology, Kansas State University, Manhattan

1993-97 Senior Scientist, Department of Plant Pathology, Kansas State University, Manhattan

1991-93 Visiting Scientist, Department of Plant Pathology, Kansas State University, Manhattan

1990 Akad. Rat aZ, Institute of Plant Breeding, Technical University of Munich-Weihenstephan, Germany

1989 Visiting Scientist, Department of Plant Pathology, Kansas State University, Manhattan

1988 Akad. Rat aZ, Institute of Plant Breeding, Technical University of Munich-Weihenstephan, Germany

1987-88 Research Associate, Department of Plant Science, University of Manitoba, Winnipeg, Manitoba, Canada

1985-87 Akad. Rat aZ, Institute of Plant Breeding, Technical University of Munich-Weihenstephan, Germany

1977-85 Postdoctoral Fellow, Institute of Applied Genetics and Plant Breeding, Free University of Berlin, Germany

Current position description:

Cytogenetics, molecular cytogenetics, and evolution of wheat;

transfer, cytogenetic identification, and characterization of wheat-alien translocations conferring resistance to diseases and pests; management of wheat genetic resources, germplasm, and genetic stocks.

Appointment: 1.0 research

Professional service:

1993 - 2000 Associate Editor, **Euphytica**

2007 - 2012 Topic Editor Plants, Cytogenetic Genome Research

2001 - 2014 Editor, Theoretical and Applied Genetics

since 2000 Editorial Board Member, **Chromosome Research**

Referred Publications

- Friebe B. 1976. Spezifische Giemsa-Färbung von heterochromatischen Chromosomensegmenten bei *Vicia faba*, *Allium cepa* und *Paeonia tenuifolia*. Theor Appl Genet 47: 275 - 283.
- Friebe B. 1976. Beobachtungen zur differentiellen Giemsa-Färbung mitotischer Metaphase-Chromosomen in einigen 1B/1R-Weizen-Roggen-Substitutions- und Translokationslinien. Z Pflanzenzüchtg 77: 304 - 308.
- Friebe B. 1977. Identification of heterochromatic regions in plant chromosomes by use of Giemsa banding techniques. Microscopica Acta 80: 53 - 56.
- Friebe B. 1978. Untersuchungen zum Schwesterchromatidenaustausch bei *Secale cereale*. Microscopica Acta 81: 159 - 165.
- Friebe B. 1979. Chiasmabildung in normalen und mutierten Karyotypen von *Vicia faba*. Biol Zbl 98: 37 - 53.
- Friebe B. 1980. Lack of effect of B chromosomes on sister chromatid exchanges in *Secale cereale*. Environm Exp Bot 20: 21 - 26.
- Friebe B. 1980. Comparison of sister chromatid exchange and chiasma formation in the genus *Secale*. Microscopica Acta 83: 103 - 110.
- Linnert G, Vogel R, Friebe B. 1981. Schwesterchromatidenaustausch und Chiasmabildung bei der Normalform und zwei asynaptischen Mutanten von *Vicia faba* L. Z Pflanzenzüchtg 86: 192 - 200.
- Friebe B, Linnert G, Vogel R. 1982. Effects of UV light and caffeine on sister chromatid exchange in *Secale cereale* in relation to incorporation of BrdU during one or two cell cycles. Microscopica Acta 86: 49 - 58.
- Friebe B. 1983. Selective silver staining of nucleolar organizer regions in *Vicia faba*. Microscopica Acta 87: 49 - 52.
- Friebe B. 1985. Prinzipien der meiotischen Rekombination. Biol Zbl 104: 655 - 682.
- Cermeno MC, Friebe B, Zeller FJ, Krolow K-D. 1987. Nucleolar competition in different (A/B)(A/B)RR and DDRR tetraploid triticales. Heredity 58: 1 - 4.
- Zeller JF, Cermeno MC, Friebe B. 1987. Cytological identification of telotrisomic and double ditelosomic lines in *Secale cereale* cv. 'Heines Hellkorn' by means of C-banding pattern and crosses with wheat-rye addition lines. Genome 29: 58 - 62.

- Friebe B, Cermeno MC, Zeller FJ. 1987. C-banding polymorphism and the analysis of nucleolar activity in *Dasypyrum villosum* (L.) Candargy, its added chromosomes to hexaploid wheat and the amphiploid *Triticum dicoccum-D. villosum*. Theor Appl Genet 73: 337 - 342.
- Vogel R, Friebe B. 1987. Induction of sister chromatid exchanges and exchange-aberrations by UV light and quinacrine mustard in relation to chiasma formation in a standard line and two oligochiasmatic mutants of *Vicia faba* L. Mut Res 192: 121 - 124.
- Friebe B, Zeller FJ, Kunzmann R. 1987. Transfer of the 1BL/1RS wheat-rye translocation from hexaploid bread wheat to tetraploid durum wheat. Theor Appl Genet 74: 423 - 425.
- Friebe B, Larter EN. 1988. Identification of a complete set of isogenic wheat/rye D-genome substitution lines by means of Giemsa C-banding. Theor Appl Genet 76: 473 - 479.
- Friebe B. 1989. Nucleolar activity of B chromosomes in *Allium cernuum* (*Alliaceae*). Plant Syst Evol 163: 87 - 92.
- Vogel R, Friebe B. 1989. Effects of caffeine pre- and posttreatment on the frequencies of sister chromatid exchanges and exchange aberrations induced by quinacrine mustard and UV light in *Vicia faba* L. Cytologia 54: 359 - 363.
- Friebe B, Heun M, Bushuk W. 1989. Cytological characterization, powdery mildew resistance and storage protein composition of tetraploid and hexaploid 1BL/1RS wheat-rye translocation lines. Theor Appl Genet 78: 425 - 432.
- Friebe B, Heun M 1989. C-banding pattern and powdery mildew resistance of *Triticum ovatum* and four *T. aestivum*-*T. ovatum* chromosome addition lines. Theor Appl Genet 78: 417 - 424.
- Heun M, Friebe B 1990. Introgression of powdery mildew resistance from rye into wheat. Phytopathology 80: 242 - 245.
- Friebe B, Hatchett JH, Sears RG, Gill BS 1990. Transfer of Hessian fly resistance from 'Chappon' rye to hexaploid wheat via a 2BS/2RL wheat-rye chromosome translocation. Theor Appl Genet 79: 385 - 389.
- Dhaliwal HS, Friebe B, Gill KS, Gill BS 1990. Cytogenetic identification of *Aegilops squarrosa* chromosome additions in durum wheat. Theor Appl Genet 79: 769 - 774.
- Heun M, Friebe B, Bushuk W 1990. Chromosomal location of the powdery mildew

- resistance gene of Amigo wheat. *Phytopathology* 80: 1129 - 1133.
- Friebe B, Kim N-S, Kuspira J, Gill BS. 1990. Genetic and cytogenetic analysis of the A genome of *Triticum monococcum*. VI. Production and identification of primary trisomics using the C-banding technique. *Genome* 33: 542 - 555.
- Friebe B, Mukai Y, Dhaliwal HS, Martin TJ, Gill BS. 1991. Identification of alien chromatin specifying resistance to wheat streak mosaic virus and greenbug in wheat germplasm by C-banding and in situ hybridization. *Theor Appl Genet* 81: 381 - 389.
- Zeller FJ, Friebe B. 1991. Evolution und Züchtung des Saatweizens. *Biuz* 21: 248 - 254.
- Gill BS, Friebe B, Endo TR. 1991. Standard karyotype and nomenclature system for description of chromosome bands and structural aberrations in wheat (*Triticum aestivum*). *Genome* 34: 830 - 839.
- Friebe B, Hatchett JH, Gill BS, Mukai Y, Sebesta EE. 1991. Transfer of Hessian fly resistance from rye to wheat via radiation-induced terminal and intercalary chromosomal translocations. *Theor Appl Genet* 83: 33 - 40.
- Friebe B, Schubert V, Blüthner W-D, Hammer K. 1992. C-banding pattern and polymorphism of *Aegilops caudata* and chromosomal constitutions of the amphiploid *T. aestivum*-*Ae. caudata* and six derived chromosome addition lines. *Theor Appl Genet* 83: 589 - 596.
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- Friebe B, Mukai Y, Gill BS, Cauderon Y. 1992. C-banding and in-situ hybridization analyses of *Agropyron intermedium*, a partial wheat X *Ag. intermedium* amphiploid, and six derived chromosome addition lines. *Theor Appl Genet* 84: 899 - 905.
- Schulz-Schaeffer J, Friebe B. 1992. Karyological characterization of a partial amphiploid, *Triticum turgidum* L. var. *durum* X *Agropyron intermedium* (Host) PB.

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- Friebe B, Mukai Y, Gill BS, Maan SS. 1993. A wheat-rye translocation maintained in perpetual monosomy in alloplasmic wheat. *J Hered* 84: 126 - 129.
- Friebe B, Gill BS, Cox TS, Zeller FJ. 1993. Registration of KS91WGRC14 stem rust and powdery mildew resistant T1BL-1RS durum wheat germplasm. *Crop Sci* 33: 220.
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- Friebe B, Gill BS, Tuleen NA, Cox TS. 1995. Registration of KS93WGRC28 powdery mildew resistant T6BS-6RL wheat germplasm. *Crop Sci.* 35: 1237.
- McIntosh RA, Friebe B, Jiang J, The D, Gill BS. 1995. Cytogenetical studies in wheat XVI. Chromosome location of a new gene for resistance to leaf rust in a Japanese wheat-rye translocation line. *Euphytica* 82: 141 - 147.
- Cabrera A, Friebe B, Jiang J, Gill BS. 1995. Characterization of *Hordeum chilense* chromosomes by C-banding and in situ hybridization using highly repeated DNA probes. *Genome* 38: 435 - 442.
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- Friebe B, Raupp J, Zhang W, Gill BS, Porter DR. 1995. Non-homoeologous wheat-rye chromosomal translocations conferring resistance to greenbug. *Euphytica* 84: 121 - 125.
- Friebe B, Jiang J, Gill BS. 1995. Detection of 5S rDNA loci and other repetitive DNA sequences on supernumerary B chromosomes of *Triticum* species. *PI Syst Evol* 196: 131 - 139.
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- Qi LL, Wang SL, Chen PD, Liu DJ, Friebe B, Gill BS. 1997. Molecular cytogenetic analysis of *Leymus racemosus* chromosomes added to wheat. *Theor. Appl. Genet.* 95: 1084 - 1091.
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- cytogenetic characterization of *Thinopyrum intermedium*-derived wheat germplasm specifying resistance to wheat streak mosaic virus. *Theor. Appl. Genet.* 96: 1 - 7.
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- Nasuda S, Friebe B, Gill BS. 1998. Gametocidal genes induce chromosome breakage in the interphase prior to the first mitotic cell division of the male gametophyte in wheat. *Genetics* 149: 1115 - 1124.
- Nasuda S, Friebe B, Busch W, Kynast RG, Gill BS 1998. Structural rearrangement in chromosome 2M of *Aegilops comosa* has prevented the utilization of the Compair and related wheat-*Ae. comosa* translocations in wheat improvement. *Theor. Appl. Genet.* 96: 780 - 785.
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- Friebe B, Tuleen NA, Gill BS. 1999. Development and identification of a complete set of *Triticum aestivum* - *Aegilops geniculata* chromosome addition lines. *Genome* 42: 374 - 380.
- Linc, G, Friebe, BR, Kynast, RG, Molnar-Lang, M, Kőszegi, B, Sutka, J, Gill, BS. 1999. Molecular cytogenetic analysis of *Aegilops cylindrica* Host. *Genome* 42: 497 - 503.
- Wang SL, Qi LL, Chen PD, Liu DJ, Friebe B, Gill BS. 1999. Molecular cytogenetic identification of wheat-*Elymus tsukushiense* introgression lines. *Euphytica* 107: 217 - 224.
- Chen WP, Chen PD, Liu DJ, Kynast R, Friebe B, Velazhahan R, Muthukrishnan S, Gill BS. 1999. Development of wheat scab symptoms is delayed in transgenic wheat plants that constitutively express a rice thaumatin-like protein gene. *Theor Appl Genet* 99: 755 - 760.
- Friebe B, Kynast RG, Hatchett JH, Sears RG, Wilson DL, Gill BS. 1999. Transfer of rye-derived Hessian fly resistance genes *H21* and *H25* from bread wheat into durum wheat. *Crop Sci* 39: 1692 - 1696.

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- Friebe B, Qi LL, Nasuda S, Zhang P, Tuleen NA, Gill BS. 2000. Development, identification, and characterization of a complete set of *Triticum aestivum*-*Aegilops speltoides* chromosome addition lines. *Theor Appl Genet* 101: 51 – 58.
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- Qi LL, Friebe B, Gill BS. 2000. Recombination in an isochromosome preferentially occurs between cis-isochromatids. *Chromosoma* 109: 390 - 396.
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- Badaeva ED, Amosova AV, Muravenko OV, Samatadze TE, Chikida NN, Zelenin AV, Friebe B, Gill BS. 2002. Genome differentiation in *Aegilops*. 3. Evolution of the D-genome cluster. *Plant Syst. Evol.* 231: 163 - 190.
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