

## **CURRICULUM VITAE**

**JOZEF JULIAN BUJARSKI**  
**Professor of Biological Sciences**  
**Northern Illinois University**  
**Department of Biological Sciences**  
**DeKalb, IL 60115**

**DATE:** January, 2015.

### **EDUCATION**

M.S., Adam Mickiewicz University, Bioorganic Chemistry, Poznan, Poland, 1972

M.S., Adam Mickiewicz University, Molecular Biology/Biochemistry, Poznan, Poland, 1976

Ph.D., Adam Mickiewicz University, Bioorganic Chemistry, Poznan, Poland, 1978

D.Sc. (Doctor of Science), Institute of Bioorganic Chemistry, Polish Academy of Sciences, May 1998

### **AREAS OF SPECIALIZATION**

RNA viruses; Molecular Biology; Biotechnology; Nucleic Acids

### **PROFESSIONAL EXPERIENCE**

Director of Plant Molecular Biology Center at Northern Illinois University, 2004-present

State Professor of the Republic of Poland, July 2003-present

Distinguished Research Professor, Northern Illinois University, 2001-present.

Professor, Northern Illinois University, Department of Biological Sciences, 1995-present

Associate Professor, Northern Illinois University, Department of Biological Sciences, 1991-1994

Assistant Professor, Northern Illinois University, Department of Biological Sciences, 1987-1991

Assistant Scientist, University of Wisconsin-Madison, Biophysics Laboratory, 1985-1987

Research Associate, University of Wisconsin-Madison, Department of Horticulture, 1981-1984

Senior Scientist (Adjunct), Polish Academy of Sciences, Institute of Plant Genetics, Poznan, Poland,  
1978-1981

Research Associate, A. Mickiewicz University, Department of Biology, Poznan, Poland, 1976-1978

Research Assistant, A. Mickiewicz University, Department of Chemistry, Poznan, Poland, 1972-1976

Research Assistant, A. Mickiewicz University, Department of Chemistry, Poznan, Poland 1970-1971

### **HONORS AND AWARDS**

Ph.D. Graduate Fellowship to Adam Mickiewicz University, Poznan, Poland, 1972-1976.

Graduated with honors in the class of bioorganic chemistry, 1972.

Tenure at NIU/BIOS, 1991.

Presidential Research Professorship Award, Northern Illinois University, 1997.

State Professorship from the President of the Republic of Poland, 2003.

### **GRANTS AWARDED**

1986-1988, USDA, "Genetic information of bromoviruses and its relationship to host specificity,"  
\$90,000.

1988-1990, USDA, "Genetic information of bromoviruses and its relationship to host specificity,"

\$90,000.

- 1988, BRSG (NIU), "Sequencing of BBMV RNA genome," \$3,000.
- 1988, BRSG (NIU), "Molecular biology of bromoviruses," \$900
- 1989, PMBC, "Molecular biology of bromoviruses," \$10,000.
- 1989-1992, NSF(INT), "Construction of bromoviral gene expressing transgenic plants;" collaboration with Switzerland, \$15,000.
- 1989, NSF(INSTR), Instrumentation grant to acquire molecular computer graphics system, \$40,000 (together with Rogers and Hampel).
- 1990, BRDC, "Utilization of RET plants to selective amplification of RNA messages," \$55,000.
- 1990-1995, NIH, "Molecular studies on RNA recombination in bromoviruses," \$650,000.
- 1991, BRDC, "Utilization of RET plants to selective amplification of RNA messages," competitive renewal, \$12,000.
- 1992, BRDC, "Utilization of RET plants to selective amplification of RNA messages," competitive renewal, \$55,000.
- 1993, NSF, "The role of replicase in nonhomologous recombination in brome mosaic virus," \$350,000.
- 1994, NATO, "Defective-interfering RNAs in broad bean mottle virus: pathogenicity and accumulation," \$5,300 (travel grant to perform a collaborative research with J. Romero, CIT-INIA, Madrid, Spain).
- 1996-1999, NSF, "The role of replicase in nonhomologous recombination in brome mosaic virus," \$450,000.
- 1996-1998, USDA, "RNA recombination in transgenic plants," \$200,000.
- 1996-1998, NIH, "Homologous recombination in brome mosaic virus," \$150,000.
- 1997, Fulbright Award to spend three months at SCRI, Dundee, Scotland.
- 2000-2003, NSF, "The role of subgenomic promoter in homologous recombination of brome mosaic bromovirus," \$400,000
- 2003-2008, NSF, "Mechanism in vitro of RNA recombination in brome mosaic bromovirus". \$450,000.
- 2006-2008, NIH, "Role of RNA interference in genetic recombination of brome mosaic bromovirus". \$150,000.
- 2009-2012, NSF "Role of Subgenomic RNAs in Genetic Recombination of Brome Mosaic Bromovirus". \$495,000.

**PATENTS**

- 1988, "Generation of RNA transcripts containing defined 3' end sequences by autolytic cleavage of larger RNA molecule and vector for use therefore." pending.
- 1997, "Targeting and enhancing RNA-RNA recombination." A notice of allowance received.
- 1998, "Method for high-frequency homologous RNA recombination." Pending
- 1998, "Method for inhibition of nonhomologous genetic RNA recombination." Pending
- 1999, "Targeting and enhancing of RNA-RNA recombination with antisense sequencing." Awarded.
2010. "Method of expression and purification of RNA dependent RNA polymerase from brome mosaic virus". US Patent Office. Pending.

**MEMBERSHIP IN PROFESSIONAL SOCIETIES**

American Society for Microbiology  
 International Society for Plant-Microbe Interactions  
 American Society for Virology  
 The American Phytopathological Society  
 The RNA Society  
 Polish Biochemical Society

**PUBLICATIONS****Book Chapters**

1. Bujarski, J.J. and I. Wiatroszak. 1980. Infection-related proteins in pea leaves infected with bean yellow mosaic virus. In J. Augustyniak, (ed.), Biological implications of protein-nucleic acids interactions. Elsevier/North Holland Biomedical Press, Amsterdam, New York, Oxford, pp. 298-299.
2. Hall, T.C., W.A. Miller, and J.J. Bujarski. 1983. The properties of brome mosaic virus replicase isolated from barley leaves. In Robertson, H.D., Howell, S.H., Zaitlin, M. and Malmberg, R.L. (eds.), Current Communications in Plant Molecular Biology: Plant Infectious Agents-viruses, Viroids and Satellites. Cold Spring Harbor Laboratory, pp. 117-119.
3. Ahlquist, P., French, R., and Bujarski, J.J. 1987. Molecular studies of brome mosaic virus using infectious transcripts from cloned cDNA. *Advances in Virus Res.*, 32:251-242.
4. Bujarski, J.J., and Miller, W.A. 1992. Application of in vitro transcription to studies on small spherical RNA viruses. A review chapter in CRC series. *Plant Genetic Engineering with Small Spherical RNA Viruses*.
5. Bujarski, J.J. and Nagy, P. 1994. RNA-RNA recombination in plant RNA viruses. In J. Paszkowski (ed.), *Homologous Recombination in Plants*. Kluwer Academic Publishers, in press.

6. Simon, A., and Bujarski, J.J. 1994. RNA-RNA recombination and evolution in virus infected plants. *Annual Review of Phytopathology* 32:337-362.
7. Bujarski, J.J. 1998. Bromovirus isolation and RNA extraction. *In* G.D. Foster and S.C. Taylor (eds.), *Plant Virology Protocols: From virus isolation to transgenic resistance*. Humana Press.
8. Bujarski, J. 1999. Recombination in viruses. *In* R.G. Webster and A. Granoff (eds.), *Encyclopaedia of Virology, Second Edition*.
9. Bujarski, J. 1999. Molecular basis of genetic variability in plant RNA viruses. *In* C.L. Mandahar (ed.), *Molecular Biology of Plant Viruses*, pp. 121-141. Kluwer Acad. Publ.
10. Roosinck, M.J., J. Bujarski, S.W. Ding, R. Hajimorad, K. Hanada, S. Scott, and M. Tousignant. 1999. Family bromoviridae, p. 923-935. *In* M.H.V. vanRegenmortel, C.M. Fauquet, and D.H.L. Bishop (ed), *Virus taxonomy-seventh report of the International Committee on Taxonomy of Viruses*. Academic Press, San Diego.
11. Bujarski, J., 2007. Bromoviruses (*Bromoviridae*). *In* R.G. Webster and A. Granoff (eds.), *Encyclopaedia of Virology, Third Edition*.
12. Bujarski, J. 2007. Recombination in viruses. *In* R.G. Webster and A. Granoff (eds.), *Encyclopaedia of Virology, Third Edition*.

### **Review articles**

1. Ahlquist P, French R, Bujarski JJ.. 1987. Molecular studies of brome mosaic virus using infectious transcripts from cloned cDNA. *Adv Virus Res.* 1987;32:215-42. Review.
2. Bujarski, J.J., Nagy, P.D., and Flasiniski, S. 1994. Molecular studies of genetic RNA-RNA recombination in brome mosaic virus. *Adv. Vir. Res.* 43, 275-302.
3. Figlerowicz M, Bujarski JJ. 1997. [Genetic recombination (+) RNA viruses]. *Postepy Biochem.* 1997;43(4):257-66. Review.
4. Figlerowicz M, Bujarski JJ. 1998. RNA recombination in brome mosaic virus, a model plus strand RNA virus. *Acta Biochim Pol.* 45(4):847-68. Review.
5. Sztuba, J., Bujarski J.J. 2008. Insights to Bromoviridae single-cell reproduction cycle: lessons from Experiments in Protoplast Systems. *J. of Virology.* 82, 10330-40. Review.
6. Sztuba-Solińska, J., Stollar, V. and Bujarski J.J. 2011. Subgenomic messenger RNAs: mastering regulation of the positive strand RNA virus life cycle. *Virology.* Apr 10; 412(2):245-55.
7. Sztuba-Solinska, J. Urbanowicz, A., Figlerowicz M. and Bujarski J.J. 2011. RNA-RNA recombination and plant virus replication and evolution. *Invited review to Annual Review of Phytopathology.* Sep 8; 49:415-43.
8. Bujarski JJ. 2013. Genetic recombination in plant-infecting messenger-sense RNA viruses: overview and research perspectives. *Front Plant Sci.* 4:68.

**Journal Research Articles**

1. Paszyc, S. and J.J. Bujarski. 1975. The PMR conformational studies of thiouridines in nonaqueous solutions. *Bull. Pol. Acad. Sci. Ser. Chem.* 23:477-482.
2. Paszyc, S. and J.J. Bujarski. 1977. Photochemical reactions of sulphur uridine and uracil analogues in aqueous solution. *Bull. Pol. Acad. Sci. Ser. Chem.* 25:1-9.
3. Bujarski, J.J. and J. Augustyniak. 1977. Large-scale preparations of oligonucleotides from commercial sodium ribonucleate. *Annals Pol. Chem. Soc.* 51:2273-2276.
4. Bujarski, J.J. 1977. Thionucleotides as tools for tRNA studies. *Postepy Biochemii (Progress in Biochemistry)* 23: review in Polish.
5. Bujarski, J.J. 1980. Molecular mechanisms of hypersensitivity reaction and systematic acquired resistance of plants against viruses. *Postepy Biochemii (Progress in Biochemistry)* 26(1): review paper in Polish.
6. Bujarski, J.J., I. Janicka-Czarnecka, and I. Wiatroszak. 1980. Some biological studies on bean yellow mosaic virus and its multiplication in pea leaves. *Tagungsbericht Nr. 184 (Probleme der Pflanzenvirologie) von Akademie der Landwirtschaftswissenschaften der DDR*, pp. 257-265.
7. Bujarski, J.J. and I. Wiatroszak. 1981. Immunochromatographic purification of bean yellow mosaic virus. *Arch. Immunologiae et Therapiae Experimentalis* 29, 115-123.
8. Bujarski, J.J. and I. Wiatroszak. 1981. Infection-related proteins in pea infected with bean yellow mosaic virus. *Plant. Sci. Letters* 21, 253-262.
9. Bujarski, J.J., S.F. Hardy, A.W. Miller, and T.C. Hall. 1982. Use of dodecyl-D-maltoside in the purification and stabilization of RNA polymerase from brome mosaic virus-infected barley. *Virology* 119, 464-473.
10. Hall, T.C., W.A. Miller, and J.J. Bujarski. 1982. Enzymes involved in the replication of plant viral RNAs, review article in *Advances in Plant Pathology*, Ingram, D.S. and Williams, P.H. (eds.). Academic Press, London, New York, Vol. 1, pp. 179-211.
11. Ahlquist, P., J.J. Bujarski, P. Kaesberg, and T.C. Hall. 1984. Localization of the replicase recognition site within brome mosaic virus RNA by hybrid-arrested RNA synthesis. *Plant Molecular Biology* 3, 37-44.
12. Dreher, T.W., J.J. Bujarski, and T.C. Hall. 1984. Mutant viral RNAs synthesized in vitro show altered aminoacylation and replicase template activities. *Nature* 31, 171-175.
13. Bujarski, J.J., T.W. Dreher, and T.C. Hall. 1985. Deletions in the 3' terminal tRNA-like structure of brome mosaic virus RNA differentially affect aminoacylation and replication in vitro. *Proc. Natl. Acad. Sci. USA* 82, 5636-5640.

14. Miller, W.A., J.J. Bujarski, T.W. Dreher, and T.C. Hall. 1986. Minus-strand initiation by brome mosaic virus replicase within the 3' tRNA-like structure of native and modified RNA templates. *J. Mol. Biol.* 187, 537-546.
15. Bujarski, J.J. and P. Kaesberg. 1986. Genetic recombination in a multipartite plant virus. *Nature* 321, 528-531.
16. Bujarski, J.J., P. Ahlquist, T.C. Hall, T.W. Dreher, and P. Kaesberg. 1986. Modulation of replication, aminoacylation and adenylation *in vitro* and infectivity *in vivo* of BMV RNAs containing deletions within the multifunctional 3' end. *The EMBO J.* 5, 1143-1148.
17. Bujarski, J.J. and P. Kaesberg. 1987. DNA inserted two bases down from the initiation site of a SP6 polymerase transcription vector is transcribed efficiently *in vitro*. *Nucl. Acid Res.* 15, 1337.
18. Dzianott, A.M., and Bujarski, J.J. 1988. An *in vitro* transcription vector which generates nearly correctly ended RNAs by self-cleavage of longer transcripts. *Nucleic Acids Res.* 16 (22), 10940.
19. Dzianott, A.M., and Bujarski, J.J. 1989. Derivation of an infectious viral RNA by autolytic cleavage of *in vitro* transcribed viral cDNAs. *Proc. Natl. Acad. Sci. USA* 86, 4823-4827.
20. Dzianott, A. and Bujarski, J. 1990. The nucleotide sequence and genomic organization of RNA3 and RNA4 components of broad bean mottle virus. *Virology*.
21. Bujarski, J. and Dzianott, A. 1991. Generation and analysis of nonhomologous RNA-RNA recombinants in brome mosaic virus: sequence complementarities at crossover sites. *J. of Virology* 65, 4153-4159.
22. Dzianott, A., and Bujarski, J. 1991. The nucleotide sequence and genome organization of the RNA-1 segment in two bromoviruses: broad bean mottle virus and cowpea chlorotic mottle virus. *Virology* 185, 553-562.
23. Romero, J., Dzianott, A., and Bujarski, J. 1992. The nucleotide sequence and genome organization of the RNA2 and RNA3 segments in broad bean mottle virus. *Virology* 187, 671-681.
24. Nagy, P., and Bujarski, J. 1992. Genetic recombination in brome mosaic virus: effect of sequence and replication of RNA on accumulation of recombinants. *J. Virol.* 66, 6824-6828.
25. Romero, J., Huang, Q., Pogany, J., and Bujarski, J.J. 1993. Characterization of defective interfering RNA components that increase symptom severity of broad bean mottle virus. *Virology* 194, 576-584.
26. Nagy, P. and Bujarski, J.J. 1993. Targeting the site of RNA-RNA recombination in brome mosaic virus with antisense sequence. *Proc. Natl. Acad. Sci. USA* 90, 6390-6394.
27. Shang, H. and Bujarski, J.J. 1993. Systemic spread and symptom formation of cowpea chlorotic mottle virus in soybean and cowpea plants map to the RNA-3 component. *Molecular Plant-Microbe Interactions* 6, 755-763.

28. Nagy, P. and Bujarski, J. 1994. Targeting of the site of nonhomologous genetic recombination in brome mosaic virus. *Arch. Virol. (supl.)* 9, 231-238.
29. Pogany, J., Huang, Q., Romero, J., Nagy, P., and Bujarski, J.J. 1994. Infectious transcripts from PCR-amplified broad bean mottle bromovirus cDNA clones and variable nature of leader regions in RNA3 segment. *J. Gen. Virol.* 75, 693-699.
30. Flasiński, S., Dziańt, A., Pratt, S., and Bujarski, J. 1994. Mutational analysis of the coat protein gene of brome mosaic virus. *Mol. Plant-Micro. Interactions* 8:23-31.
31. Nagy, P., A. Dziańt, P. Ahlquist, and J.J. Bujarski. 1995. Mutations in the helicase-like domain of 1a protein alter the sites of RNA-RNA recombination in brome mosaic virus. *J. Virol.* 69:2547-2556.
32. Nagy, P., and J. Bujarski. 1995. Efficient system of homologous RNA recombination in brome mosaic virus: sequence and structure requirements and accuracy of crossovers. *J. Virol.* 69:131-140.
33. Dziańt, A., S. Flasiński, S. Pratt, and J. Bujarski. 1995. Foreign complementary sequences facilitate genetic recombination in brome mosaic virus. *Virology* 208:370-375.
34. Pogany, J., J. Romero, Q. Huang, and J.J. Bujarski. 1995. *De novo* generation of defective interfering RNAs in broad bean mottle bromovirus. *Virology* 212:574-586.
35. Nagy, P. and J.J. Bujarski. 1996. Homologous RNA recombination in brome mosaic virus: AU-rich sequences decrease the accuracy of crossovers. *J. Virol.* 70:415-426.
36. Flasiński, S., A. Dziańt, J. Spear, J. Johnson, and J.J. Bujarski. 1997. Structure-based rationale for the rescue of systematic movement of brome mosaic virus by spontaneous second-site mutations in the coat protein gene. *J. Virol.* 71:2500-2504.
37. Nagy, P., and J.J. Bujarski. 1997. Engineering of homologous recombination hot-spots with AU-rich sequences in brome mosaic virus. *J. Virol.* 71:3799-3810.
38. Pogany, J., J. Romero, and J.J. Bujarski. 1997. Effect of 5' and 3' terminal sequences, overall length and coding capacity on the accumulation of defective-like RNAs associated with broad bean mottle virus. *Virology* 228:236-243.
39. Figlerowicz, M., P. Nagy, and J.J. Bujarski. 1997. A mutation in the putative RNA polymerase gene inhibits nonhomologous but not homologous genetic recombination in brome mosaic virus. *Proc. Natl. Acad. Sci. USA* 94:2073-2078.
40. Nagy, P.D. and J.J. Bujarski. 1998. Silencing homologous RNA recombination hot spots with GC-rich sequences in brom mosaic virus. *J. Virol.* 72:1122-1130.
41. Figlerowicz, M., P. Nagy, N. Tang, C.C. Kao, and J.J. Bujarski. 1998. Mutations in the N-terminus of the brome mosaic virus polymerase affect genetic RNA-RNA recombination. *J. Virol.* 9192-9200.
42. Nagy, P.D., C. Ogiela and J.J. Bujarski. 1999. Mapping sequences active in homologous recombination in brome mosaic virus: prediction of recombination hot-spots. *Virology* 254:92-

104.

43. Bruyere, A., M. Wantroba, S. Flasiński, A. Dziańt, and J.J. Bujarski. 2000. Frequent homologous recombination events between molecules of one RNA component in a multipartite RNA virus. *J. Virology* 74:4214-4219.
44. Dziańt, A., Rauffer-Bruyere, N., and J. J. Bujarski. 2001. Studies on functional interaction between brome mosaic virus replicase proteins during RNA recombination, using combined mutants in vivo and in vitro. *Virology* 289, 137-149.
45. Olsthoorn RC, Bruyere A, Dziańt A, J.J. Bujarski. 2002. RNA recombination in brome mosaic virus: effects of strand-specific stem-loop inserts. *J Virol.* 76(24):12654-62.
46. Wierzchosławski R, Dziańt A, Kunimalayan S, Bujarski JJ. 2003. A transcriptionally active subgenomic promoter supports homologous crossovers in a plus-strand RNA virus. *J Virol.* 77:6769-76.
47. Susana Llamas, Claudio Sandoval, Mar Babin, Judy Pogany, Jozef J. Bujarski, and Javier Romero. 2004. Effect of the Host and Temperature on the Formation of Defective RNAs Associated with *Broad Bean Mottle Bromovirus* Infection. *Phytopathology.* 94, 69-75.
48. A. Dziańt, and J. J. Bujarski. 2004. Infection and RNA Recombination of Brome mosaic virus in *Arabidopsis thaliana*. *Virology.* 318(2):482-92.
49. Wierzchosławski R, Dziańt A, Bujarski J. 2004. Dissecting the requirement for subgenomic promoter sequences by RNA recombination of brome mosaic virus in vivo: evidence for functional separation of transcription and recombination. *J. Virol.* 78:8552-64.
50. Urbanowicz A, Alejska M, Formanowicz P, Blazewicz J, Figlerowicz M, Bujarski JJ. 2005. Homologous crossovers among molecules of brome mosaic bromovirus RNA1 or RNA2 segments in vivo. *J Virol.* 79:5732-42.
51. Wierzchosławski R, Bujarski JJ. 2006. Efficient in vitro system of homologous recombination in brome mosaic bromovirus. *J Virol.* 80:6182-7.
52. Wierzchosławski R, Urbanowicz A, Dziańt A, Figlerowicz M, Bujarski JJ. 2006. Characterization of a novel 5' subgenomic RNA3a derived from RNA3 of Brome mosaic bromovirus. *J Virol.* 80:12357-66.
53. Bujarski, J. 2007. Genetic Recombination in Viruses. Review. *Encyclopedia of Virology.* 3rd Edition. 2007.
54. Bujarski, J. 2007. Bromoviridae. Review. *Encyclopedia of Virology.* 3rd Edition.
55. Sztuba-Solinska J, Bujarski JJ. 2008. Insights into the single-cell reproduction cycle of members of the family bromoviridae: lessons from the use of protoplast systems. *J Virol.* 82:10330-40.
56. Sandoval C, Pogany J, Bujarski J, Romero J. 2008. Use of a defective RNA of broad bean



- mottle bromovirus for stable gene expression in legumes. *Arch Virol.* 153:1755-8.
57. Sztuba-Solińska J., Dziańt A. and Bujarski J.J. 2010. Recombination of 5' Subgenomic RNA3a with Genomic RNA3 of Brome mosaic bromovirus *in vitro* and *in vivo*. *Virology.* 2011 Feb 5;410(1):129-41.
  58. Dziańt, A., Sztuba-Solińska, J., and Jozef J. Bujarski. 2012. Mutations in the antiviral RNAi defense pathway modify Brome Mosaic Bromovirus RNA Recombinant Profiles. *Molecular Plant-Microbe Interactions.* 25(1):97-106.
  59. Olszewska M, Bujarski JJ, Kurpisz M. 2012. P-bodies and their functions during mRNA cell cycle: mini-review. *Cell Biochem Funct.* 30(3):177-82.
  60. Poudel B, Sabanadzovic S, Bujarski J, Tzanetakis IE. 2012. Population structure of Blackberry yellow vein associated virus, an emerging crinivirus. *Virus Res.* 169(1):272-5.
  61. Sztuba-Solińska J, Fanning SW, Horn JR, and Bujarski JJ. 2012. Mutations in the coat protein-binding *cis*-acting RNA motifs debilitate RNA recombination of *Brome mosaic virus*. *Virus Res.* 170(1-2):138-49.
  62. Bujarski JJ. 2013. Genetic recombination in plant-infecting messenger-sense RNA viruses: overview and research perspectives. *Front Plant Sci.* 2013 Mar 26;4:68. doi: 10.3389/fpls.2013.00068. eCollection 2013.
  63. Otulak K, Chouda M, Bujarski J, Garbaczewska G. 2014. The evidence of Tobacco rattle virus impact on host plant organelles ultrastructure. *Micron.* 2014 Dec 6;70C:7-20. doi: 10.1016/j.micron.2014.11.007.
  64. Weber PH, Bujarski JJ. 2015. Multiple functions of capsid proteins in (+) stranded RNA viruses during plant-virus interactions. *Virus Res.* 2015 Jan 22;196C:140-149.

## **Abstracts**

- Bujarski, J.J., I. Czarnecka, and I. Wiatroszak. 1979. Determination of bean yellow mosaic virus concentration in pea leaves using ELISA assay. Physiological and pathological aspects of plant virus disease development. Blazejewko-Poznan, Poland.
- Hall, T.C., J.J. Bujarski, S.F. Hardy, W.A. Miller, and L.S. Loesch-Fries. 1981. Isolation of plant viral RNA-dependent RNA polymerases. Fifth Int. Congress of Virology, Strasbourg, France, p. 249.
- Bujarski, J.J., T.W. Dreher, and T.C. Hall. 1984. Deletions in the tRNA-like structure of brome mosaic virus RNA have different effects on its replication in vitro. Sixth International Congress of Virology, Sendai, Japan.
- Bujarski, J.J., P. Kaesberg, and P. Ahlquist. 1986. Deletion analysis of BMV RNA3 5' sequences for in vivo replication. 1st International Congress of Plant Molecular Biology, Savannah, GA.
- Bujarski, J.J. and P. Kaesberg. 1987. Insertion of signals for autolytic cleavage in viral cDNAs provides nearly correct 3' ends of viral RNA transcripts. Abstracts of VIIIth International Congr

ess of Virology. Edmonton, Canada, p. 96.

- Bujarski, J.J., A. Dziaott, and P. Kaesberg. 1987. Genomic RNAs of brome mosaic virus and cowpea chlorotic mottle virus: molecular cloning, sequence homologies and activity of chimaeric RNAs. Abstracts of VIIIth International Congress of Virology, Edmonton, Canada.
- Bujarski, J.J., and Kasberg, P. 1987. Insertion of signals for autocatalytic cleavage in viral cDNAs provides nearly correct 3' ends of viral RNA transcripts. NATO Advanced Study Institute, Plant Molecular Biology, Copenhagen.
- Dziaott, A., and Bujarski, J.J. 1988. Derivation of an infectious RNA viruses by autolytic cleavage of in vitor transcribed viral cDNA. The second International Congress of Plant Molecular Biolgy, Jerusalem.
- Dziaott, A., and Bujarski, J.J. 1989. Nucleotide sequence and genome organization of broad bean mottle virus; sequence homologies with other bromoviruses. 2nd International Symposium on Positive Strand RNA Viruses, Vienna, Austria.
- Bujarski, J.J. and Dziaott, A. 1990. Nonhomologous RNA recombination in brome mosaic virus. NATO Advanced Study Institute, Plant Molecular Biology 1990. May 14-22. Schloss Elmau, Bavaria, West Germany.
- Bujarski, J.J., and Dziaott, A. 1990. Nonhomologous RNA recombination in brome mosaic virus. VIIIth International Congress of Virology. August 26-31. Berlin.
- Dziaott, A., S. Pratt, and J. Bujarski (1991) "Mutations of the coat protein of brome mosaic virus affect symptom formation in *Chenopodium hybridum*". *Phytopathology* 81, p. 1148-
- Romero, J. and J. Bujarski (1991) "Identification of defective interfering-like RNAs in broad bean mottle virus". *Phytopathology* 81, p. 1183
- Shang, H.Z. and J. Bujarski (1991) "Sequence analysis of the 5' end RNAs of the Strains of cowpea chlorotic mottle virus". *Phytopathology* 81, p. 1220.
- Romero, J., Q. Huang and J. Bujarski (1991) "Biological and Molecular Characterization of four broad bean mottle virus strains". *Phytopathology* 81, p. 1243.
- Flasinski, S., and J. Bujarski (1991) "Studies on recombination in the coat protein coding region of brome mosaic virus RNA-3". *Phytopathology* 81, p. 1247;
- Nagy, P. and J. Bujarski (1991) "Separation of recombination and replication functions in the 3' noncoding region of brome mosaic virus RNA-3." *Phytopathology* 81, p. 1247.
- Romero, P., Q. Huang, J. Pogany and J. Bujarski (1991) "Characterization of defective RNAs in broad bean mottle virus strains". Abstracts of 3rd International Congress of Plant Molecular Biology, October 1991, Tucson, Arizona; abstract #1138.
- Nagy, P., S. Flasinski, J. Bujarski (1991) "Studies on RNA-RNA recombination in brome mosaic virus". Abstracts of 3rd International Congress of Plant Molecular Biology, October 1991, Tucson, Arizona; abstract #1138.

- Romero, J., Q. Huang, J. Pogany, and J.J. Bujarski (1992) "Host-modulated accumulation and encapsidation of DI-RNAs of broad bean mottle virus." *Phytopathology* 82, 1383; abstr. #A1111.
- Shang, H. and J.J. Bujarski (1992) "Systemic spread and symptom formation of cowpea chlorotic mottle virus in soybean and cowpea plants map to the RNA-3 component." *Phytopathology* 82, 1383; abstr. #A1112.
- Huang, Q., J. Romero and J.J. Bujarski (1992) "Removal and de novo generation of defective interfering RNAs in broad bean mottle virus strains." *Phytopathology* 82, 1383, Abstr. #A1113.
- Flasinski, S., A. Dzianott, S. Pratt and J.J. Bujarski (1992) "The effect of mutations in the coat protein gene of brome mosaic virus infection in local lesion and systemic hosts." *The Third International Symposium on Positive Strand RNA Viruses*. September 19-24, Clearwater, FL; abstr. #P1-17.
- Romero, P., Q. Huang, J. Pogany and J.J. Bujarski (1992) "Defective-interfering RNAs in broad bean mottle virus (BBMV)." *Third International Symposium on Positive Strand RNA Viruses*. September 19-24, Clearwater, FL; abstr. #P2-34.
- Nagy, P.D. and J.J. Bujarski (1992) "Genetic recombination in brome mosaic virus: evidence for hybridization-mediated crossovers." *Third International Symposium on Positive Strand RNA Viruses*. September 19-24, Clearwater, FL; abstr. #S4-3.
- Nagy, P. and J. Bujarski (1993) "Designing of efficient systems to study homologous and nonhomologous RNA-RNA recombination in brome mosaic virus. IXth International Congress of Virology, Glasgow.
- Nagy, P., A. Dzianott, P. Ahlquist and J. Bujarski (1993) "Effect of mutations in the helicase-like domain of 1a protein on RNA recombination in brome mosaic virus." IXth International Congress of Virology, Glasgow.
- Nagy, P., A. Dzianott, P. Ahlquist and J. Bujarski (1993) "Effect of mutations in the helicase-like domain of 1a protein on RNA recombination in brome mosaic virus." 12th ASV meeting, Davis, CA.
- Nagy, P. and J. Bujarski (1993) "Effect of secondary structure on homologous RNA-RNA recombination in brome mosaic virus." 12th ASV meeting, Davis, CA.
- Bujarski, J.J. (1994) "Genetic recombination in brome mosaic virus - homologous and nonhomologous RNA-RNA crossing overs re-defined." *Juan-March Workshop on Genetic Recombination and Defective-Interfering Particles in RNA Viruses*, Madrid, Spain.
- Nagy, P.D., and Bujarski, J.J. (1994) "Mechanism of RNA-RNA recombination in brome mosaic virus: role of sequence homology and complementarity." *Juan-March Workshop on Genetic Recombination and Defective-Interfering Particles in RNA Viruses*, Madrid, Spain.
- Dzianott, A., Flasinski, S., and Bujarski, J.J. (1994) "Heteroduplex-mediated recombination within the intercistronic region of brome mosaic virus RNA3 segment." 13th Annual ASV Meeting, Madison, WI.

- Nagy, P.D., and Bujarski, J.J. (1994) "Mechanism of RNA-RNA recombination in brome mosaic virus: role of sequence homology and complementarity." 13th Annual ASV Meeting, Madison, WI.
- Pogany, J., Huang, Q., Romero, J., and Bujarski, J.J. (1994) "De novo generation of defective interfering (DI) RNAs of broad bean mottle bromovirus: mapping of junction sites." 13th Annual ASV Meeting, Madison, WI.
- Nagy, P.D., Dzianott, A., and Bujarski, J.J. (1994) "Homologous and nonhomologous RNA recombination in brome mosaic virus: the role of sequence homology and complementarity." 4th International Congress of Plant Molecular Biology. Amsterdam.
- Bujarski, J. and P. Nagy. 1995. Homologous and nonhomologous RNA recombination in brome mosaic virus. Fifth Positive RNA Virus Conference. Amsterdam, June.
- Nagy, P. and J. Bujarski. 1995. Imprecise homologous recombination in brom mosaic virus. 14th American Society for Virology Annual Meeting, Austin, TX.
- Figlerowicz, M. and J. Bujarski. 1995. Mutants in 2a replicase protein affect genetic recombination in brome mosaic virus. 14th American Society for Virology Annual Meeting, Austin, TX.
- Pogany, J., J. Romero and J.J. Bujarski. 1995. Deletion analysis of defective interfering RNAs associated with broad bean mottle bromovirus. 14th American Society for Virology Annual Meeting, Austin, TX.
- Nagy, P., M. Figlerowicz and J. Bujarski. 1996. Sequences and proteins involved in genetic recombination of brome mosaic virus. Xth International Congress of Virology. Jerusalem, August.
- Romero, J., A. Molina-Garcia, M. Babin, J. Pogany, and J.J. Bujarski. 1996. Host effect on accumulation and encapsidation of defective-interfering RNAs in broad bean mottle virus infections. Xth International Congress of Virology. Jerusalem, August.
- Olsthoorn, R. and J. Bujarski. 1997. The role of secondary structure in RNA recombination of brome mosaic virus. 15th Annual ASV Meeting, Bozeman, MT.
- Rauffer-Bruyere, N., Sgro, J.-Y., and Bujarski, J.J. 1998 Dissecting the role of putative RNA polymerase protein in genetic recombination of brome mosaic virus: mutagenesis of „fingers” domain. 17th Annual ASV Meeting, Vancouver, Canada.
- Dzianott, A., and Bujarski, J.J. 1998. Infection and RNA recombination of brome mosaic virus as studied on *Arabidopsis thaliana*. 17th Annual ASV Meeting, Vancouver, Canada.
- Bruyere, A., and Bujarski, J.J. 1998 Studies on recombination in brome mosaic virus under different selection conditions. 17th Annual ASV Meeting, Vancouver, Canada.
- Figlerowicz, M., and Bujarski, J.J. 1998 Studying RNA sequences at crossover sites during nonhomologous recombination in brome mosaic virus. 17th Annual ASV Meeting, Vancouver, Canada.
- J.J. Bujarski. 1998. Towards dissecting the mechanism of RNA recombination in brome mosaic virus.

18<sup>th</sup> International Congress of Genetics. Beijing, China. INVITED SPEAKER.

J. J. Bujarski. 1998. Genetic RNA recombination in brome mosaic virus: the phenomenon and the possible mechanisms. 5<sup>th</sup> International Symposium on Positive Strand RNA Viruses. St. Petersburg, FL, USA.

J. J. Bujarski. 1998. Genetic RNA recombination in nontransgenic and transgenic plants: the use of brome mosaic virus model system. Vta Szkoła Letnia Biotechnologii Uniwersytetu Gdanskiego. Golun, Polska.

Rauffer-Bruyere, N., Figlerowicz, M., and Bujarski, J.J. 1999. Comparison of in vitro properties of wt and mutant brome mosaic bromovirus RdRp preparations and identification of an efficient pausing signal. 18th Annual ASV Meeting, Amherst, MA, USA.

Bruyere, M. Wantroba, and Bujarski, J.J.. 1999. Frequent RNA-RNA crossovers among molecules of the same RNA component during infection with brome mosaic virus. 18th Annual ASV Meeting, Amherst, MA, USA.

Bruyere, M. Wantroba, and J. J. Bujarski. 1999. RNA recombination between a viral transgene and infectious or noninfectious brome mosaic bromovirus inoculum. 18th Annual ASV Meeting, Amherst, MA, USA.

M. Figlerowicz, M. Alejska, N. Malinowska and J. J. Bujarski. 1999. Studies on brome mosaic bromovirus RNA polymerase, a key protein in RNA recombination. 18th Annual ASV Meeting, Amherst, MA, USA.

A. Dziañott and J.J. Bujarski. 1999. The infectivity of brome mosaic bromovirus variants bearing mutations in both replicase proteins. 18th Annual ASV Meeting, Amherst, MA, USA.

A. Bruyere, R. Olsthoorn, and J.J. Bujarski. 1999. The role of RNA secondary structure during homologous recombination in brome mosaic bromovirus. 18th Annual ASV Meeting, Amherst, MA, USA.

Bruyere, A., A. Dziañott, M. Figlerowicz, N. Rauffer-Bruyere, M. Wantroba, and J. J. Bujarski. 1999. Studies on the mechanism of RNA recombination in brome mosaic bromovirus. XIth International Congress of Virology. Sydney, Australia.

A Bruyere, M. Wantroba, W. Kaniewski, S. Flasiński, and J. J. Bujarski. 1999. RNA recombination in transgenic plants and different levels of resistance to brome mosaic virus. XIth International Congress of Virology. Sydney, Australia.

J.J. Bujarski. 1999. Homologous crossovers among molecules of the RNA3 segment during infection with brome mosaic virus. Virus Evolution Workshop. Ardmore, OK, USA.

A. Dziañott and J. J. Bujarski. 2000. Genetic recombination in brome mosaic bromovirus: the role of intergenic region in junction site selection. 19th Annual ASV Meeting, Fort Collins, CO, USA.

J.J. Bujarski. 2000. Applications of viral RNA recombination in biotechnology. International Conference on Biotechnology in Agriculture: Present and Future. Al-Salt, Jordan.

J.J. Bujarski. 2000. Badania nad mechanizmem rekombinacji genetycznej wirusow o genomie RNA.

Referat wygłoszony na zaproszenie Instytutu Chemii Bioorganicznej PAN, Poznan.

A. Dziañott, and Jozef J. Bujarski. 2001. Generation of defective RNAs during infection of brome mosaic virus in *Arabidopsis thaliana*. 20<sup>th</sup> Annual ASV Meeting, Madison, WI, USA.

R. Wierzoslawski, A. Dziañott, and J. J. Bujarski. 2001. Characterization of the homologous recombination activity of subgenomic promoter elements in brome mosaic virus RNA3. 20<sup>th</sup> Annual ASV Meeting, Madison, WI, USA.

J. Bujarski. 2001. The phenomenon of RNA-RNA recombination in RNA virus world. An invited lecture at the RNA Life Conference, Indiana University, IN, USA.

J. Bujarski. 2001. Homologous recombination activity of the subgenomic promoter sequences during a model plant virus infection. Cassava Biotechnology Network Meeting. The Donald Danforth Center. St. Louis, MO, USA.

J. Bujarski. 2002. The mechanism of homologous RNA recombination at the subgenomic promoter sequence in brome mosaic bromovirus. An invited lecture at The Symposium on Positive Strand RNA Viruses. Helsinki, Finland.

Aleksandra Dziañott, and Jozef J. Bujarski. 2002. Studies on RNA recombination of brome mosaic virus during infection in *Arabidopsis thaliana*. 21<sup>st</sup> Annual ASV Meeting, Lexington, KY, USA.

Rafal Wierzoslawski, Aleksandra Dziañott, Selvi Kunimalayan, and Jozef Bujarski. 2002. Dissecting the subgenomic promoter recombination hot spot in brome mosaic virus. 21<sup>st</sup> Annual ASV Meeting, Lexington, KY, USA.

Hanna Wierzoslawska, Selvi Cunimalayaan, and Jozef Bujarski. 2003. Further purification of the brome mosaic virus RNA-dependent RNA polymerase. 22<sup>nd</sup> Annual ASV Meeting, Davis, CA, USA.

Mulu Tesfay, Aleksandra Dziañott, and Jozef Bujarski. 2003. Contribution of the Brome Mosaic Virus RNA Terminal Untranslated Regions to Homologous Intra-segmental RNA3-RNA3 Recombination. 22<sup>nd</sup> Annual ASV Meeting, Davis, CA, USA.

Aleksandra Dziañott, and Jozef Bujarski. 2003. Brome mosaic virus infection in *Arabidopsis thaliana*: the effect of host genes on virus replication and recombination. 22<sup>nd</sup> Annual ASV Meeting, Davis, CA, USA.

Rafal Wierzoslawski, Aleksandra Dziañott, and Jozef Bujarski. 2003. RNA recombination at the subgenomic promoter in brome mosaic virus RNA3: relationship with transcription. 22<sup>nd</sup> Annual ASV Meeting, Davis, CA, USA.

Five new abstracts in 2004.

Six new abstracts in 2005.

Five new abstracts in 2006.

Five new abstracts in 2007.

Four new abstracts in 2008.

Three new abstracts in 2009.

Three new abstracts in 2010.

Three new abstracts in 2011.  
 Four new abstracts in 2012.  
 Four new abstracts in 2013  
 Two new abstracts in 2014

### **Papers Presented**

- Bujarski, J.J. and I. Wiatroszak. 1980. Immunochromatographic purification of bean yellow mosaic virus and tobacco mosaic virus. 10th Ann. Meeting of Polish Genetic Society, Poznan, Poland.
- Bujarski, J.J., and Hall, T.C. 1982. Purification and characterization of an RNA-dependent RNA polymerase from brome mosaic virus-infected baley leaves. ASV Meeting, Ithaca, NY.
- Bujarski, J.J., P. Ahlquist, P. Kaesberg, and T.C. Hall. 1983. Localization of site of origin of BMV RNA replication. 2nd Annual Meeting of the American Society for Virology, East Lansing, MI.
- Dreher, T.W., J.J. Bujarski, and T.C. Hall. 1984. Mutant viral RNAs synthesized in vitro show altered aminoacylation and replicase template activities. Gordon Conference on Plant Molecular Biology, Proctor Academy, Andover, MA.
- Dreher, T.W., Bujarski, J.J., and Hall, T.C. 1984. Mutant viral RNAs synthesized in vitro show altered aminoacylation and replicase template activities. ASV Meeting, Madison, WI.
- Bujarski, J.J., and Hall, T.C. 1984. Initiation and recognition sites for (-) strand synthesis reside in the 3' terminal 135 nucleotides of brome mosaic virus RNAs. ASV Meeting, Madison, WI.
- Bujarski, J.J., and Kaesberg, P. 1986. Sequence analysis of RNA1 in two strains of cowpea chlorotic mottle virus. ASV Meeting, Santa Barbara, CA.
- Bujarski, J.J. 1988. The bromovirus family: molecular biology and vector application. Sungene Company, January. INVITED SPEAKER.
- Dallas, M., Ford, C.G., Pratt, S., and Bujarski, J.J. 1988. An analysis of the effects of sequence exchanges on the infectivity of transcribed RNAs of bromoviruses. 7th Annual Meeting of American Society for Virology, Austin, TX, June.
- Dzianott, A., and Bujarski, J.J. 1988. Derivation of an infectious RNA viruses by autolytic cleavage of in vitro transcribed viral cDNA. The Second International Congress of Plant Molecular Biology. Jerusalem, November. INVITED SPEAKER.
- Ford, C.G., and Bujarski, J.J. 1989. The effects of exchanges within replicase protein 1a genes on the biological activity of the two bromoviruses: brome mosaic virus and cowpea chlorotic mottle virus. 8th Annual Meeting of American Society for Virology, London, Ontario, Canada, July.
- Bujarski, J.J. 1989. The molecular biology of bromoviruses. An annual retreat of The Noble Foundation, September. INVITED SPEAKER.
- Bujarski, J.J., and Dzianott, A.M. 1989. Nonhomologous recombination in brome mosaic virus generates a variety of illegitimate RNA3 molecules. International Symposium on viral genes

and plant pathogenesis. University of Kentucky, Lexington, KY, October.

- Bujarski, J.J. 1989. The phenomenon of RNA self-cleavage: the mechanisms and applications. DuPont Chemical Company, November. INVITED SPEAKER.
- Bujarski, J.J. 1990. The molecular mechanisms involved in replication and recombination of bromovirus genomes. Purdue University, Department of Biology. INVITED SPEAKER. March 23, 1990.
- Bujarski, J.J. and Dzianott, A. 1990. nonhomologous RNA recombination in brome mosaic virus. Eidgenossische Technische Hochschule, Institut für Pflanzenwissenschaften, Zurich, Switzerland.
- Bujarski, J.J. and Dzianott, A. 1990. Nonhomologous RNA recombination in brome mosaic virus. NATO Advanced Study Institute, Plant Molecular Biology 1990. May 14-22. Schloss Elmau, Bavaria, West Germany.
- Bujarski, J.J., and Dzianott, A. 1990. Nonhomologous RNA recombination in brome mosaic virus. VIIIth International Congress of Virology. Berlin. August 26-31.
- Bujarski, J.J. and Steven Pratt. "Participation of the coat protein genes in host-virus interactions in the case of brome mosaic virus: Amer. Soc. Virology meeting, July 1990, Salt Lake City, Utah.
- Dzianott, A.S., S. Pratt, and J. Bujarski. 1991. Mutations of the coat protein of brome mosaic virus affect symptom formation in *Chenopodium hybridum*. APS meeting, St. Louis, MO. INVITED SPEAKER.
- Bujarski, J.J. 1991. RNA-RNA recombination and defective interfering RNAs in bromoviruses. Eidgenossische Technische Hochschule, Institut für Pflanzenwissenschaften, Zurich, Switzerland. June. INVITED SPEAKER.
- Dzianott, J., Romero, J., and Bujarski, J. 1991. The complete nucleotide sequence and organization of the broad bean mottle virus RNA genome. Amer. Soc. Virology meeting, July, Fort Collins, CO.
- Bujarski, J.J. 1992. Molecular biology of bromoviruses. University of Maryland. Invited speaker.
- Bujarski, J.J. 1992. Molecular biology of bromoviruses. University of California-Riverside. Invited speaker.
- Bujarski, J.J. 1992. Defective-interfering RNAs in broad bean mottle virus. Minisymposium on satellite RNAs and defective RNAs in plant RNA viruses. Invited speaker.
- Bujarski, J.J. 1992. Invited to give seminars at several research institutions in Germany, Netherlands, France, and Italy. Spoke about RNA recombination in RNA viruses and about host-related genetic information in bromoviruses.
- Bujarski, J.J. 1992. Targeting of site of recombination in brome mosaic virus. Third International conference on positive RNA viruses. Clearwater, FL. Invited speaker.
- Nagy, P. and Bujarski, J. 1993. Designing of efficient systems to study homologous and



nonhomologous RNA-RNA recombination in brome mosaic virus. IXth International Congress of Virology, Glasgow.

- Nagy, P., Dzianott, A., Ahlquist, P. and Bujarski, J. 1993. Effect of mutations in the helicase-like domain of 1a protein on RNA recombination in brome mosaic virus. IXth International Congress of Virology, Glasgow.
- Nagy, P., Dzianott, A., Ahlquist, P. and Bujarski, J. 1993. Effect of mutations in the helicase-like domain of 1a protein on RNA recombination in brome mosaic virus. 12th ASV meeting, Davis, CA.
- Nagy, P. and Bujarski, J. 1993. Effect of secondary structure on homologous RNA-RNA recombination in brome mosaic virus. 12th ASV meeting, Davis, CA.
- Bujarski, J. 1993. Genetic recombination in bromoviruses. John Innes Institute, Norwich, England. Invited Speaker.
- Bujarski, J. 1993. RNA recombination in brome mosaic virus. ASM Annual Meeting, Atlanta, GA, May. Invited Speaker.
- Nagy, P. and Bujarski, J. 1994. Effect of secondary structure on homologous RNA-RNA recombination in brome mosaic virus. 12th ASV meeting, Davis, CA, July.
- Bujarski, J. 1994. Genetic recombination in bromoviruses. John Innes Institute, Norwich, England. Invited Speaker.
- Bujarski, J. 1994. Homologous and nonhomologous recombination in brome mosaic virus. Northern Illinois University, Department of Biological Sciences, April.
- Bujarski, J. 1994. Self-cleavage cassettes in transgenic plants. RNA processing meeting. Madison, WI, May. Invited Speaker.
- Bujarski, J. 1995. RNA recombination in brome mosaic virus. Risk Assessment of RNA recombination in transgenic plants. American Biology Institute. A USDA discussion panel, College Park, MD, March. Invited Panelist.
- Bujarski, J. 1995. Homologous and nonhomologous RNA recombination in brome mosaic virus. Fifth Positive RNA Virus Conference. Amsterdam, June. Invited Speaker.
- Bujarski, J. 1995. Potential applications of RNA recombination in biotechnology. Second Biotechnology Summer School of the University of Gdansk. Laczyno, Poland, July. Invited Lecturer.
- Bujarski, J. 1995. Mechanism of RNA recombination. Annual American Phytopathology Society Meeting. Pittsburgh, PA, August. Invited Speaker.
- Bujarski, J. 1996. Mechanism of RNA-RNA recombination in RNA viruses. Institute of Plant Molecular Biology, Louis Pasteur University, Strasbourg, April and May. Invited Speaker.
- Bujarski, J. 1996. Mechanism of RNA-RNA recombination in RNA viruses. Friedrich Miescher

Institute, Basel, Switzerland, June. Invited Speaker.

Bujarski, J. 1997. Molecular mechanism of RNA-RNA recombination in RNA viruses. Institute of Biotechnology, Godolo, Hungary, April. Invited Speaker.

Bujarski, J. 1997. Molecular determinants of RNA recombination in brome mosaic virus. Cambridge University, Cambridge, England, July. Invited Speaker.

Bujarski, J. 1997. Mechanism of RNA recombination in brome mosaic virus. Scottish Crop Research Institute, Invergowrie, Dundee Scotland, September. Invited Speaker.

Bujarski, J. Different mechanisms of homologous and nonhomologous RNA recombination in BMV. Midwest Branch of American Society of Plant Physiologists. Annual Meeting, Northern Illinois University, March. Invited Speaker.

Bujarski, J. 1998. Towards dissecting the mechanism of RNA recombination in brome mosaic virus. Fifth International Positive Strand RNA Symposium. St. Petersburg, FL, May. Invited Speaker.

Bujarski, J. 1998. Genetic RNA recombination in RNA viruses. Fifth Biotechnology Summer School, University of Gdansk, Poland, July. Invited Speaker.

Bujarski, J. 1998. Genetic RNA recombination in brome mosaic virus. Eighteenth International Congress of Genetics. Beijing, China, August. Invited Speaker.

Bujarski, J. 1999. Mechanism of genetic recombination in brome mosaic virus. Institute of Bioorganic Chemistry, Poznan, Poland, March.

Bruyer, A. and J. Bujarski. 1999. Generating transgenic *N. bethamiana* plants suitable for RNA recombination with brome mosaic bromovirus. American Society for Virology Meeting, Amherst, July.

Rauffer, N. and J. Bujarski. 1999. Biochemical properties of brome mosaic virus replicase variants. American Society for Virology Meeting, Amherst, July.

Bruyere, A., A. Dzianott, M. Figlerowicz, N. Rauffer-Bruyere, M. Wantroba, and J. J. Bujarski. 1999. Studies on the mechanism of RNA recombination in brome mosaic bromovirus. XIth International Congress of Virology. Sydney, Australia.

A Bruyere, M. Wantroba, W. Kaniewski, S. Flasiński, and J. J. Bujarski. 1999. RNA recombination in transgenic plants and different levels of resistance to brome mosaic virus. XIth International Congress of Virology. Sydney, Australia.

J.J. Bujarski. 1999. Homologous crossovers among molecules of the RNA3 segment during infection with brome mosaic virus. Virus Evolution Workshop. Ardmore, OK, USA.

J.J. Bujarski. 2000. Applications of viral RNA recombination in biotechnology. International Conference on Biotechnology in Agriculture: Present and Future. Al-Salt, Jordan.

J.J. Bujarski. 2000. Studies on the mechanism of genetic recombination in RNA viruses. An invited lecture at the Institute of Bioorganic Chemistry in Poznan, Poland.

J. Bujarski. 2001. The phenomenon of RNA-RNA recombination in RNA virus world. An invited lecture at the RNA Life Conference, Indiana University, IN, USA.

J. Bujarski. 2001. Homologous recombination activity of the subgenomic promoter sequences during a model plant virus infection. Cassava Biotechnology Network Meeting. The Donald Danforth Center. St. Louis, MO, USA.

J. Bujarski. 2002. The mechanism of homologous RNA recombination at the subgenomic promoter sequence in brome mosaic bromovirus. An invited lecture at The Symposium on Positive Strand RNA Viruses. Helsinki, Finland.

Aleksandra Dziañott, and Jozef J. Bujarski. 2002. Studies on RNA recombination of brome mosaic virus during infection in *Arabidopsis thaliana*. 21<sup>st</sup> Annual ASV Meeting, Lexington, KY, USA.

Rafal Wierzchoslawski, Aleksandra Dziañott, Selvi Kunimalayan, and Jozef Bujarski. 2002. Dissecting the subgenomic promoter recombination hot spot in brome mosaic virus. 21<sup>st</sup> Annual ASV Meeting, Lexington, KY, USA.

Four papers presented in 2003.

Three papers presented in 2004.

Four papers presented in 2005.

Three papers presented in 2006.

Three papers presented in 2007.

Dziañott A., and Bujarski J.J. Co-Infection with Two Strains of Brome Mosaic Bromovirus Confirms the Recombination Hot Spot Within the Intercistronic Region of the RNA3 Segment. American Society for Virology Meeting, Cornell, NY July 2008.

Sztuba-Solinska J., and Bujarski J.J. Role of a novel 5' sgRNA3a during Brome mosaic bromovirus RNA recombination in single protoplast cells. American Society for Virology Meeting, Cornell, NY July 2008.

Aleksandra Dziañott, Anni Moore, Joanna Sztuba-Solinska, J. and Jozef J. Bujarski. Knocking out of the RNA Interference (RNAi) Genes Affects Genetic RNA Recombination of Brome Mosaic Bromovirus in *Arabidopsis thaliana*. RNA Society meeting, Berlin, August 2008.

Aleksandra Dziañott, Anni Moore, and Jozef J. Bujarski. The Knockouts of the RNA Interference (RNAi) Genes Affect Nonhomologous RNA Recombination of Brome Mosaic Bromovirus in *Arabidopsis thaliana*. XIV International Congress of Virology, Istanbul (Constantinople), Turkey, August 2008.

A. Dziañott, J. Sztuba-Solinska, And J. Bujarski. Homologous RNA Recombination at the intercistronic region of Brome mosaic virus RNA3: frequency of inter-strain crossovers and the role of subgenomic RNA3a. XIV International Congress of Virology, Istanbul (Constantinople), Turkey, August 2008.

Aleksandra Dziañott, Joanna Sztuba-Solinska, Anni Moore, and Jozef J. Bujarski. The Loss-of-function Alleles of the RNA Interference (RNAi) Genes Affect RNA-RNA Recombination of Brome Mosaic Bromovirus in *Arabidopsis thaliana*. RNA Virus Evolution Workshop. Noble Foundation, October 2008.

Sztuba-Solinska J. and Bujarski J.J. SgRNA3a-mediated RNA recombination in Brome mosaic bromovirus. American Society for Virology 28th Annual Meeting. University of British Columbia, Vancouver, BC, Canada July 11-15, 2009.

A. Dziañott, A. Moore, J. Sztuba-Solinska, and J.J. Bujarski. Null alleles of the RNA Interference Genes Affect RNA-RNA Recombination of Brome Mosaic Bromovirus. 9th International Plant Molecular Biology Congress. October 25-30, 2009 St. Louis, MO, USA. Cornell, NY July 2008.

Sztuba-Solinska J., and Bujarski J.J. Subgenomic RNA3a – the molecule for homologous crossovers of Brome mosaic bromovirus genome. 14th Annual Meeting of the RNA Society. May 26-31. 2009. Madison, WI, USA.

29th Annual Meeting of the RNA Society, July 17-21 2010. Montana State University, Bozeman, Montana

Joanna Sztuba-Solinska, Aleksandra Dziañott and Jozef Bujarski. 2010. Recombination of 5' subgenomic RNA3a with genomic RNA3 of Brome mosaic Virus in vitro and in vivo. RNA Evolution Symposium, Noble Foundation. Ardmore, OH. Oct. 2010

J. Sztuba-Solińska, A. Dziañott and J.J. Bujarski. 2010. „Recombination of 5' subgenomic RNA3a with genomic RNA3 of brome mosaic bromovirus in vitro and in vivo" 9th International Symposium on Positive-Strand RNA Viruses, May 17-21, 2010, Atlanta. GA

J. Sztuba-Solińska, A. Dziañott and J.J. Bujarski 2010. 5' subgenomic RNA3a recombines with genomic RNA3 of brome mosaic bromovirus in vitro and in vivo". 4th European Congress of Virology 7 - 11 April, Villa Erba Cernobbio, Como, Italy

J. Sztuba-Solińska, A. Dziañott, and J.J. Bujarski. 2011. Role of coat protein during BMV RNA recombination in vitro and in vivo. 30th Annual Meeting of the RNA Society. July 16-20 University of Minnesota, Minneapolis, MN.

Kolondam, B.<sup>1</sup> and Bujarski J.J. 2012. Co-Infection with two strains of Brome mosaic bromovirus confirms homologous genetic recombination within viral RNA segments in different hosts. 31th Annual Meeting of the RNA Society, July 21-25 University of Wisconsin-Madison, Madison, WI

J. Sztuba-Solińska, Sean Fanning, James R. Horn, and J.J. Bujarski. 2012 Coat protein mutants affect RNA recombination of Brome mosaic bromovirus: interactions with *cis*-acting motifs. 31th Annual Meeting of the RNA Society, July 21-25 University of Wisconsin-Madison, Madison, WI.

Aleksandra Dziañott, Joanna Sztuba-Solińska, and Jozef J. Bujarski, 2012. „Mutations in the antiviral RNAi defense pathway modify Brome Mosaic Bromovirus RNA Recombinant Profiles" EMBO Conference "Antiviral RNAi: From Molecular Biology Towards Applications" 11-15 June 2012, Pultusk, Poland

Katharina Arndt, and Jozef J. Bujarski 2013. Genetic recombination of Brome mosaic virus RNAs in agro-infected *N. benthamiana* plants: towards studying the coat protein function(s). 32th Annual Meeting of the RNA Society, July 20-24 Pennsylvania State University, University Park, Pennsylvania.

Philipp Heinrich Weber, and Józef J. Bujarski. 2013. Lack of local RNA silencing suppression activity of brome mosaic virus proteins. 32th Annual Meeting of the RNA Society, July 20-24 Pennsylvania State University, University Park, Pennsylvania.

Katharina Arndt, and Jozef J. Bujarski. 2013. Genetic recombination of Brome mosaic virus RNAs in agro-infected *N. benthamiana* plants: towards studying the coat protein function(s). Plant Virus International Workshop "Green viruses, from gene to landscape", Hyeres, France, Sept. 7-11.

Dzianott, A, Johns, M. , Kolondam, B., Rao, P. , Sztuba-Solinska, J., and Bujarski J.J. 2013. Co-Infection with two strains of Brome mosaic bromovirus reveals high frequency homologous genetic recombination events in different hosts. Vienna International Plant Conference "Plant Diseases and Resistance Mechanisms", Vienna, Austria, Feb. 19-22.

Sztuba-Solinska, J. , Dzianott, A. , Wierzchoslawski, R., Horn, J. , and Bujarski, J.J. Transcription, replication and recombination of genomic and subgenomic RNAs in Brome mosaic virus, a model (+) strand RNA virus. Speaker at the conference on "'Transcriptional Gene Expression Regulation in Plants" June 30th-July 2, 2014, Poznan, Poland

Philipp H. Weber, and Józef J. Bujarski. Encapsidation of host RNA by Brome mosaic bromovirus. Virology Congress, July 2014, Toronto, Canada.

Philipp H. Weber, Bozman C., Arndt K., Dzianott A., and Bujarski, J.J. Multifunctional capsid protein: roles during genetic RNA recombination in Brome mosaic virus. EMBO workshop on "Intercellular communication in plant development and disease", 24-29 August 2014, "The Bischenberg" near Strasbourg (France).

## **DIRECTION OF THESES AND DISSERTATIONS**

Stuczynska, Barbara. 1974. "Photolysis of Thiouridines," M.S. Thesis, A. Mickiewicz University, Poznan, Poland

Krzeminska, Krystyna. 1975. "The synthesis of 2,4-dithiouridine and identification of photolysis products," M.S. Thesis, A. Mickiewicz University, Poznan, Poland.

Pratt, S. and Bujarski, J. 1990. Application of hybrid RNA molecules to study the role of coat protein sequences in the infectivity and host range of brome mosaic and cowpea chlorotic mottle viruses. M.S. Thesis. Northern Illinois University.

Pogany, J. and Bujarski, J. 1993. Molecular studies on broad bean mottle virus (BBMV) using in vitro transcribed viral RNAs. M.S. Thesis. Northern Illinois University.

Shang, H. and Bujarski, J. 1993. Mapping of host-related genetic information in cowpea chlorotic mottle virus. M.S. Thesis. Northern Illinois University.

Pogany, J. 1996. Mechanism of generation and accumulation of defective-interfering RNAs in broad bean mottle virus. Ph.D. Thesis. Northern Illinois University.

Carolyn Erwin and Bujarski, J. 2005. Genetic recombination of brome mosaic virus in *N. benthamiana*. M.S. thesis. Northern Illinois University.

Mulu Tesfay and Bujarski, J. 2005. Homologous recombination of brome mosaic virus RNA3 in vitro and in vivo. M.S. thesis. Northern Illinois University.

Wierzchoslawska A. and Bujarski, J. 2005. Towards further purification of brome mosaic virus RNA

polymerase. M.S. thesis. Northern Illinois University.

Wierzchoslawski, R. and Bujarski, J., 2005. Dissection the mechanism of RNA recombination at the subgenomic promoter in brome mosaic virus. Ph.D. Thesis. Northern Illinois University.

Urbanowicz, A. and Bujarski, J., 2005. Studies on homologous recombination among the RNA segments of the brome mosaic virus genome. Ph.D. Dissertation. Institute of Bioorganic Chemistry, Polish Academy of Sciences.

Sobczak, D., and Bujarski, J., 2007. Role of eIF3 complex in replication of brome mosaic virus. M.Sc. Thesis. Northern Illinois University.

Sztuba, J. and Bujarski, J., 2007. Isolation and application of mesophyll protoplasts from *Arabidopsis thaliana*. M.Sc. Thesis. Northern Illinois University.

Olson, J. and Bujarski, J., 2010. The use of transgenic plants for designing novel anti-viral resistance in *Arabidopsis thaliana*. M. Sc. Thesis. Northern Illinois University.

Sztuba-Solinska, J. and Bujarski, J., 2010. Mechanism of RNA recombination in brome mosaic virus: role of coat protein. Ph.D..Dissertation.. Northern Illinois University.

Beivy Kolondam, and Bujarski, J., 2011. Recombination of brome mosaic virus genomic RNA2 between Fescue and Russian strains in three different hosts. M.Sc.Thesis. Northern Illinois University.

Philipp Weber, and Bujarski, J., 2012. RNA silencing suppression activity of the proteins encoded by the brome mosaic virus rna genome. M.Sc.Thesis. Northern Illinois University.

Michael Flinn, and Bujarski, J., 2013. Accessing the Efficiency of Movement Protein *In Vitro* Translation from Genomic RNA3 versus Subgenomic RNA3a in Brome Mosaic Virus. M.Sc. Thesis, Northern Illinois University.

## **OTHER PROFESSIONAL INFORMATION**

### **Invited Editorship**

Invited Editor for a two-issue series of "Seminars in Virology" on RNA recombination/defective RNA formation. Part I was published in 1996, issue 7(6); part II is in preparation.

### **Book Translations**

Bujarski, J.J. and Milos, A. Translated from English to Polish a book by Matt Ridley, "The red queen: sex and evolution of human nature," pp. 1-500. Published by REBIS in 2000.

### **Meetings Organized**

Co-organizer (together with J. Romero and S. Schlesinger) of a Juan-March Symposium: "RNA recombination and defective interfering particles in RNA viruses." March 20-25, 1994, Madrid, Spain.

Co-organizer (together with C. Kao) of a Symposium: "Bromoviridae" at the American Society for Virology Meeting in Madison, WI July 2001.

Invited to organize a Symposium on Viral RNA Recombination at the XVth International Congress of Virology, Sapporo, Japan. 2011.

### **Leaves of absence**

1978 three months, Institute for Molecular and Cellular Biology (du CNRS) in Strasbourg, France

1989 six weeks, Institut fur Pflanzenwissenschaften in Zurich, Switzerland.

1991 two weeks, Institut fur Pflanzenwissenschaften in Zurich, Switzerland.

1993 two weeks, John Innes Institute in Norwich, England, and Institute for Plant Molecular Genetics in Cologne, Germany.

1994 one week, CIT-INIA, Madrid, Spain

1996 eight months (sabbatical), Institute for Plant Molecular Biology (du CNRS) in Strasbourg, France

1997 three months (sabbatical), Scottish Crop Research Institute, Dundee, Scotland.

2003 two months, U. of Chicago, Dr. Jonathan Staley laboratory.

2004 six months (sabbatical), U. of Chicago, Laboratories of Drs. Daphne Preuss and Bernard Roizman

2010 six months (sabbatical), visiting professor at plant research laboratories in Europe.

### **UNIVERSITY SERVICE**

#### **-Committees**

BIOS Library Committee, BIOS Search Committees, BIOS Personnel and Policy Committee, Plant Molecular Biology Center Executive Committee; College Council, NIPTRIC; Intellectual Property Committee, University Press Committee, University Library Committee, PRP Selection Committee, Homeland Security Task Force, NIU Faculty Senate.

#### **-Thesis Committees**

**Masters** for : Steven Pratt, Colleen Ford, Jenny Ford, Scott Galasinski, Cherill Guss, Jennifer Chase, Judy Pogany, Carolyn Erwin, Joanna Sztuba, David Sobczak, Jessica Olson, Anthony Alfano, Jodeen Tigrett-Hanks, Michael Flinn, Beivy Kolondam, Elisabeth Karczynski, Parth Rao.

**Ph.D.** for: Judy Pogany, Rafal Wierzchoslawski, Anna Urbanowicz, Joanna Sztuba, Phillip Weber.

### **TEACHING [FROM 1991-PRESENT]**

1991

Fall 423 (600) : Molecular Virology (3hrs per week);  
670 Independent Study: 3 masters students;

1992

Spring 370 Special Problems in Biology

Fall 670 Independent study: two masters students  
423 Virology (3 hrs per week)

1993

Spring 423 Virology (3 hrs per week)

Fall 370 Special Problems in Biology  
 1994  
 Spring. 423 Molecular virology (3 hrs per week)  
 1995  
 Spring. 423 Molecular virology (3 hrs per week)  
 1996  
 Sabbatical leave.  
 1997  
 Spring. 423 Molecular virology (3 hrs per week)  
 1998  
 Spring. 423 Molecular virology (3 hrs per week)  
 1999  
 Off teaching because of Presidential Research Award.  
 2000  
 Spring 423 Molecular Virology (3 hrs per week)  
 2001  
 Spring 423 Molecular Virology (3 hrs per week)  
 2002  
 Spring 423 Molecular Virology (3 hrs per week)  
 2003  
 Spring 423 Molecular Virology (3 hrs per week)  
 2004  
 Sabbatical leave.  
 2005  
 Spring 423 Molecular Virology (3 hrs per week)  
 2006  
 Fall 493 RNA World {New course} (3 hrs per week)  
 Spring 423 Molecular Virology (3 hrs per week)  
 2007  
 Spring 423 Molecular Virology (3 hrs per week)  
 2008  
 Fall 493 RNA World (3 hrs per week)  
 Spring 423 Molecular Virology (3 hrs per week)  
 2009  
 Fall 493 RNA World (3 hrs per week)  
 Spring 423 Molecular Virology (3 hrs per week)  
 2010  
 Fall 493 RNA World (3 hrs per week)  
 2011  
 Spring Sabbatical leave.  
 Fall RNA World (3 hrs per week)  
 2012  
 Spring 423 Molecular Virology (3 hrs per week)  
 Fall 493 RNA World (3 hrs per week)  
 2013  
 Spring 423 Molecular Virology (3 hrs per week)  
 Fall 493 RNA World (3 hrs per week)  
 2014  
 Spring 423 Molecular Virology (3 hrs per week)



