

Personal data:

Name: Miodrag Grbic

Citizenship: Canada

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Current position: 2004-present Associate Professor, Department of Biology, University of Western Ontario, Canada

Employment and training:

2006-2008 Marie Curie Incoming International Professor, Max Planck Institute for Developmental Biology, Tübingen, Germany

2004-2005 Visiting Professor, Max Planck Institute for Developmental Biology, Tübingen, Germany (sabbatical)

1997-2003 Assistant professor, Department of Biology, University of Western Ontario, Canada

2003-present Adjunct Professor, Wayne State University (USA)

1996-1998 Human Frontier postdoctoral fellow, Wellcome Cancer and Developmental Biology Research Institute, Univ. of Cambridge (UK)

1995-1996 NSF postdoctoral fellow, University of Wisconsin, Madison (USA)

1989-1995 Ph.D. student University of Wisconsin, Madison (USA) double major in Developmental Biology and Entomology

1985-1988 M.Sc. student, University of Novi Sad (Yugoslavia) Entomology

1979-1983 B.Sc. student University of Novi Sad (Yugoslavia) Entomology

Honors and awards:

- 2020 Vanguard Awards for licensed patent University of Western Ontario, Canada
- OECD research fellowship IMIDA, Murcia, Spain (2019)
- Adjunct Professor, University of Belgrade, Serbia (2018-present)
- Adjunct Professor, University of La Rioja, Spain (2016)
- Vanguard award for biotechnological development: First patent issue award WorldDiscoveries, University of Western Ontario, Canada (2015)
- OECD research fellowship Instituto de Ciencias de la Vid y del Vino (CSIC, UR, Gobierno de La Rioja), Logrono, Spain (2014)
- Investigador vinculado de CSIC, Instituto de Ciencias de la Vid y del Vino (CSIC, UR, Gobierno de La Rioja), Logrono, Spain (2011-2014)

- OECD research fellowship University of Tubingen, Germany (2007)
- Section Editor, Journal Arthropod Structure and Development, Elsevier (2006-current)
- Marie Curie Incoming International Fellowship, 2005 (EU)
- Adjunct Professor, Wayne State University 2003 (USA)
- Premier's Research Excellence Award 2000; Ministry of Energy, Science and Technology Ontario, (Canada)
- HFSP Postdoctoral Fellowship, Human Frontier in Science Program 1996 (International)
- NSF Postdoctoral Fellowship, National Science Foundation 1995 (USA)
- Fulbright fellowship for Ph.D. studies; Fulbright Foundation, 1989 (USA)

Publications:

1. Safaa Kader, Ricardo Hernandez, Kriti Khatri, Andrea O'Malley, Vojislava Grbic, Miodrag Grbic, Maksymilian Chruszcz (2023) Structural studies of proteins originating from Arachnida. **Systematic and Applied Acarology** in press
2. Ildefonso M. De la Fuente, Iker Malaina, Maria Fedetz, Maksymilian Chruszcz, Gontzal Grandes, Oleg Targoni, Antonio A. Lozano-Pérez, Eyal Shteyer, Ami Ben Ya'acov, Agustín Gómez de la Cámara, Alberto M. Borobia, Jose Carrasco-Pujante, Jose Ignacio Pijoan, Carlos Bringas, Gorka Pérez-Yarza, Alberto Ouro, Michael J. Crawford, Varda Shoshan-Barmatz, Vladimir Zhurov, José I. López, Shira Knafo, Magdalena Tary-Lehmann, Toni Gabaldón, Miodrag Grbic (2022) Stability of SARS-CoV-2 spike antigens against mutations <https://www.medrxiv.org/content/10.1101/2022.10.13.22280980v1.full> Submitted to **PNAS**
3. Cosmopolitanism at the Roman Danubian Frontier, Slavic Migrations, and the Genomic Formation of Modern Balkan Peoples Iñigo Olalde Pablo Carrión*, Ilija Mikić, Nadin Rohland Shop Mallick , Iosif Lazaridis , Miomir Korać , Snežana Golubović, Sofija Petković, Nataša Miladinović-Radmilović, Dragana Vulović, Kristin Stewardson, Ann Marie Lawson, Fatma Zalzal, Kim Callan, Željko Tomanović, Dušan Keckarević, Miodrag Grbić, Carles Lalueza-Fox, David Reich <https://doi.org/10.1101/2021.08.30.458211>.
4. Bensoussan N, Milojevic M, Bruinsma K, Dixit S, Pham S, Singh V, Zhurov V, Grbić M, Grbić V. (2022) Localized efficacy of environmental RNAi in *Tetranychus urticae*. **Sci Rep.** 12(1):14791. doi: 10.1038/s41598-022-19231-3.
5. Dixit S, Widemann E, Bensoussan N, Salehipourshirazi G, Bruinsma K, Milojevic M, Shukla A, Romero LC, Zhurov V, Chruszcz M, Grbić M, Grbić V (2022) □-cyanoalanine synthase protects mites against *Arabidopsis* defenses. **Plant Physiology**, kiac147. doi: 10.1093/plphys/kiac147.
6. Daneshian L, Renggli I, Hanaway R, Offermann LR, Schlachter CR, Hernandez Arriaza R, Henry S, Prakash R, Wybouw N, Dermauw W, Shimizu LS, Van Leeuwen T, Makris TM, Grbic V, Grbic M, Chruszcz M. (2022) Structural and functional characterization of β-cyanoalanine synthase from *Tetranychus urticae*. **Insect Biochem Mol Biol.** 142:103722. doi: 10.1016/j.ibmb.2022.103722.
7. Bruinsma K, Salehipourshirazi G, Zhurov V, Dagher F, Grbic M, Grbic V (2021): Effect of Neo-Boost pesticide on mortality and development of different life stages of two-spotted spider mite, *Tetranychus urticae*; under revision **Frontiers in Agronomy** 3:701974. doi: 10.3389/fagro.2021.701974
8. Salehipourshirazi G, Bruinsma K, Ratlamwala H, Dixit S, Arbona V, Widemann E, Milojevic M, Jin P, Bensoussan N, Gomez- Cadenas A, Zhurov V, Grbic M, Grbic V (2021) Rapid specialization of counter defenses enables two-spotted spider mite to adapt to novel plant hosts; **Plant Physiology**: kiab412.

9. Daneshian L, Schlachter C, Fernando Saraiva Macedo Timmers L, Taylor Radford T, Kapingidza B, Dias T, Liese J, Antonio Sperotto R, Grbic V, Grbic M, Chruszcz M (2021) Delta class glutathione S-transferase (TuGSTd01) from the two-spotted spider mite *Tetranychus urticae* is inhibited by abamectin, **Pesticide Biochemistry and Physiology** 176:104873.
10. Widemann E, Bruinsma K, Walshe-Roussel B, Saha R, Letwin D, Zhurov V, Bernards M, Grbic M, and Grbic V (2021) Multiple indole glucosinolates and myrosinases defend *Arabidopsis* against *Tetranychus urticae* herbivory. **Plant Physiology** 187: 116–132.
11. Bensoussan N, Dixit S, Tabara M, Letwin D, Milojevic M, Antonacci M, Jin P, Arai Y, Bruinsma K, Suzuki T, Fukuhara T, Zhurov V, Geibel S, Nauen R, Grbic M, Grbic V. (2020) [Environmental RNA interference in two-spotted spider mite, *Tetranychus urticae*, reveals dsRNA processing requirements for efficient RNAi response.](#) **Nature Scientific Reports** 10(1):19126. doi: 10.1038/s41598-020-75682-6.
12. Lozano-Pérez AA, Pagán A, Zhurov V, Hudson SD, Hutter JL, Pruneri V, Pérez-Moreno I, Grbic V, Cenis JL, Grbic M, Aznar-Cervantes S. (2020) [The silk of gorse spider mite *Tetranychus lintearius* represents a novel natural source of nanoparticles and biomaterials.](#) **Nature Scientific Reports** 10(1):18471. doi: 10.1038/s41598-020-74766-7.
13. Maraš, Vesna., Tello, Javier., Gazivoda, Anita Milena Mugoša, Mirko Perišić, Jovana Raičević, Nataša Štajner, Rafael Ocete, Vladan Božović, Tatjana Popović, Enrique Garca-Escudero, Miodrag Grbić, José Miguel Mart. nez-Zapater, Javier Ibáñez. Population genetic analysis in old Montenegrin vineyards reveals ancient ways currently active to generate diversity in *Vitis vinifera*. **Nature Scientific Reports** 10, 15000 (2020). <https://doi.org/10.1038/s41598-020-71918-7>
14. Namin HH, Zhurov V, Spenler J, Grbić M, Grbić V, Scott IM. (2020) [Resistance to pyridaben in Canadian greenhouse populations of two-spotted spider mites, *Tetranychus urticae* \(Koch\).](#) **Pesticide Biochemistry and Physiology** 170:104677. doi: 10.1016/j.pestbp.2020.104677.
15. Navia, D; Novelli, VM; Rombauts, S ; Freitas-Astua, J ; de Mendonca, RS; Nunes, MA; Machado, MA; Lin, YC ; Le, P; Zhang, ZC; Grbic, M; Wybouw, N; Breeuwer, JAJ; Van Leeuwen, T; Van de Peer, Y (2019). Draft Genome Assembly of the False Spider Mite *Brevipalpus yothersi*. **Microbiology Resource Announcements**. Volume 8, Issue 6, e01536-18.
16. Schlachter CR, Daneshian L, Amaya J, Klapper V, Wybouw N, Borowski T, Van Leeuwen T, Grbic V, Grbic M, Makris TM, Chruszcz M. (2019) Structural and functional characterization of an intradiol ring-cleavage dioxygenase from the polyphagous spider mite *Tetranychus urticae* Koch. **Insect Biochemistry and Molecular Biology** Vol. 107 p. 19-30.
17. Nicolas Bensoussan, Vladimir Zhurov , Sota Yamakawa, Caroline H. O'Neil , Takeshi Suzuki, Miodrag Grbic and Vojislava Grbic (2018) The Digestive System of the Two-Spotted Spider Mite, *Tetranychus urticae* Koch, in the Context of the Mite-Plant Interaction. **Frontiers in Plant Science**, Vol. 9, article 1206. doi: 10.3389/fpls.2018.01206
18. Rioja C, Zhurov V, Bruinsma K, Grbic M, Grbic V. (2017). Plant-herbivore interaction: a case of an extreme generalist, the two-spotted spider mite, *Tetranychus urticae*. **Molecular Plant Microbe Interaction**. doi: 10.1094/MPMI-07
19. Schlachter, CR ; Klapper, V ; Wybouw, N ; Radford, T ; Van Leeuwen, T ; Grbic, M ; Chruszcz, M. (2017). Structural Characterization of a Eukaryotic Cyanase from *Tetranychus urticae*. **JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY**. 65(27): 5453-5462.
20. Takeshi Suzuki* , María Urizarna España* , Maria Andreia Nunes*, Vladimir Zhurov*, Wannes Dermauw, Masahiro Osakabe, Thomas Van Leeuwen, Miodrag Grbic , Vojislava Grbic. (2017). Protocols for the delivery of small molecules to the two-spotted spider mite, *Tetranychus urticae*. **PLOS1**.
21. Santos-Matos, G, Wybouw, N ; Martins, NE ; Zele, F ; Riga, M ; Leitao, AB ; Vontas, J ; Grbic, M ; Van Leeuwen, T ; Magalhaes, S ; Sucena, E. (2017). *Tetranychus urticae* mites do not mount an induced immune response against bacteria. **PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES**. 284(1856)

22. Astrid Bryona, Andre H. Kurlovs, Wannes Dermauw, Robert Greenhalgh, Maria Riga, Miodrag Grbić, Luc Tirry, Masahiro Osakabe, John Vontasc, Richard M. Clark, Thomas Van Leeuwen. (2017). Disruption of a horizontally transferred phytoene desaturase abolishes carotenoid accumulation and diapause in *Tetranychus urticae*. **Proceedings of the National Academy of Sciences of the United States of America**. 114: E5871–E5880.
23. Takeshi Suzuki*, Maria Andreia Nunes*, Mara Urizarna España*, Hooman Hosseinzadeh Namin*, Pengyu Jin*, Nicolas Bensoussan*, Vladimir Zhurov*, Tawhid Rahman*, Rebecca De Clerc, Pierre Hilson, Vojislava Grbic, Miodrag Grbic. (2017). RNAi-based reverse genetics in the chelicerate model *Tetranychus urticae*: A comparative analysis of five methods for gene silencing. **PLOS1**.–E5880
24. Bensoussan, N, Santamaria, ME, Zhurov, V, Diaz, I, Grbic, M, Grbic, V (2016) Plant-Herbivore Interaction: Dissection of the Cellular Pattern of *Tetranychus urticae* Feeding on the Host Plant. **FRONTIERS IN PLANT SCIENCE: Volume: 7**;
25. Bensoussan, N, Santamaria, ME, Zhurov, V, Diaz, I, Grbic, M, Grbic, V (2016) Plant-Herbivore Interaction: Dissection of the Cellular Pattern of *Tetranychus urticae* Feeding on the Host Plant. **FRONTIERS IN PLANT SCIENCE: Volume: 7 DOI: 10.3389/fpls.2016.01105**
26. Ryan M Pace, Miodrag Grbić, Lisa M Nagy (2016) Composition and genomic organization of arthropod Hox clusters **EVODEVO: Volume: 7 DOI: 10.1186/s13227-016-0048-4**
27. Jose Díaz-Riquelme, Vladimir Zhurov, Cristina Rioja, Ignacio Pérez-Moreno, Rafael Torres-Pérez, Jérôme Grimplet, Pablo Carbonell-Bejerano, Sabina Bajda, Thomas Van Leeuwen, José Miguel Martínez-Zapater, Miodrag Grbic and Vojislava Grbic (2016) Comparative genome-wide transcriptome analysis of *Vitis vinifera* responses to adapted and non-adapted strains of two-spotted spider mite, *Tetranychus urticae*. **BMC Genomics 17:74**
28. Catherine Martel, Vladimir Zhurov, Marie Navarro, Manuel Martinez, Marc Cazaux, Philippe Auger, Alain Migeon, M Estrella Santamaria, Nicky Wybouw, Isabel Diaz, Thomas Van Leeuwen, Maria Navajas, Miodrag Grbic, Vojislava Grbic (2015) Tomato Whole Genome Transcriptional Response to *Tetranychus urticae* Identifies Divergence of Spider Mite-Induced Responses Between Tomato and Arabidopsis. **Molecular Plant-Microbe Interactions** : 28, 3, P.343-361
29. Ryan M Pace, P Cole Eskridge, Miodrag Grbić, Lisa M Nagy (2014) Evidence for the plasticity of arthropod signal transduction pathways. **Development genes and evolution: Vol. 224 (4-6): 209-222.**
30. Peter Demaeht, Edward J Osborne, Jothini Odman-Naresh, Miodrag Grbić, Ralf Nauen, Hans Merzendorfer, Richard M Clark, Thomas Van Leeuwen (2014) High resolution genetic mapping uncovers chitin synthase-1 as the target-site of the structurally diverse mite growth inhibitors clofentezine, hexythiazox and etoxazole in *Tetranychus urticae*. **Insect biochemistry and molecular biology** Vol. 51: 52-61.
31. Sucena, E., Vanderberg, K., Zhurov V. Grbic, M. (2014) Reversion of developmental mode in insects: evolution from long germband to short germband in the polyembryonic wasp *Macrocentrus cingulum* Brischke. **Evolution and development** Volume: 16 Issue: 4 Pages: 233-246
32. Wybouw N, Dermauw W, Tirry L, Stevens C, Grbić M, Feyereisen R, Van Leeuwen T (2014) A gene horizontally transferred from bacteria protects arthropods from host plant cyanide poisoning. **Elife** 24;3:e02365
33. Cazaux M, Navarro M, Bruinsma KA, Zhurov V, Negrave T, Van Leeuwen T, Grbic V, and Grbic M (2014) Application of two-spotted spider mite *Tetranychus urticae* for plant-pest interaction studies. **Journal of Visualized Experiments** Issue: 89 doi:10.3791/51738
34. Zhurov V, Navarro M, Bruinsma KA, Arbona V, Santamaria ME, Cazaux M, Wybouw N, Osborne EJ, Ens C, Rioja C, Vermeirssen V, Rubio-Somoza I, Krishna P, Diaz I, Schmid M, Gómez-Cadenas A, Van de Peer Y, Grbic M, Clark RM, Van Leeuwen T, Grbic V (2014) Reciprocal responses in the interaction between Arabidopsis and the cell-content-feeding chelicerate herbivore spider mite. **Plant Physiol** 164(1):384-99.
35. Dermauw W, Osborne EJ, Clark RM, Grbić M, Tirry L, Van Leeuwen T. (2013) A burst of ABC genes in the genome of the polyphagous spider mite *Tetranychus urticae*. **BMC**

Genomics 10;14:317

36. Stephen D. Hudson, Vladimir Zhurov, Vojislava Grbic, Miodrag Grbic, Jeffrey L. Hutter. (2013) Measurement of the Elastic Modulus of Spider Mite Silk Fibers Using Atomic Force Microscopy. **Journal of Applied Physics** Volume: 113 Issue: 15 154307 doi:10.1063/1.4800865
37. Van Leeuwen, T, Dermauw, W, Grbic, M, Tirry, L, Feyereisen, R (2013) Spider mite control and resistance management: does a genome help? **Pest Management Science** Vol. 69:156-159.
38. Dermauw, W, Wybouw, N, Rombauts, S, Menten, B, Vontas, J, Grbic, M, Clark, RM, Feyereisen, R, Van Leeuwen, T (2013) A link between host plant adaptation and pesticide resistance in the polyphagous spider mite *Tetranychus urticae*. **Proceedings of the National Academy of Sciences of the United States of America** 110: 113-122
39. Wybouw, N, Balabanidou, V, Ballhorn, DJ, Dermauw, W, Grbic, M, Vontas, J, Van Leeuwen, T (2012) A horizontally transferred cyanase gene in the spider mite *Tetranychus urticae* is involved in cyanate metabolism and is differentially expressed upon host plant change. **Insect Biochemistry and Molecular Biology** Vol.42: 881-889.
40. Santamaria, ME, Hernandez-Crespo, P, Ortego, F, Grbic, V, Grbic, M, Diaz, I & Martinez, M. (2012) Cysteine peptidases and their inhibitors in *Tetranychus urticae*: a comparative genomic approach. **BMC Genomics**. 13:307
41. Veenstra, JA, Rombauts, S & Grbic, M (2012) In silico cloning of genes encoding neuropeptides, neurohormones and their putative G-protein coupled receptors in a spider mite. **Insect Biochem Mol Biol** 42(4): 277-95
42. Van Leeuwen T, Demaeht P, Osborne EJ, Dermauw W, Gohlke S, Nauen R, Grbic M, Tirry L, Merzendorfer H & Clark RM (2012) Population bulk segregant mapping uncovers resistance mutations and the mode of action of a chitin synthesis inhibitor in arthropods. **Proceedings of the National Academy of Sciences of the United States of America** 109: 4407-4412
43. Dermauw W, Ilias A, Riga M, Tsagkarakou A, Grbić M, Tirry L, Van Leeuwen T & Vontas J (2012) The cys-loop ligand-gated ion channel gene family of *Tetranychus urticae*: implications for acaricide toxicology and a novel mutation associated with abamectin resistance. **Insect Biochemistry and Molecular Biology** 42: 455-465
44. Miodrag Grbic et al. (2011) The genome of *Tetranychus urticae* reveals herbivorous pest adaptations. **Nature** Vol. 479: 487- 492.
45. Miodrag Grbic Evolution of polyembryonic development in parasitic wasps. In: Genetica molecolare dello sviluppo degli insetti. **Atti della Accademia Nazionale Italiana di Entomologia** 2008. Firenze. 43-51.
46. Zhurov V., Terzin, T., and Grbic M (2007) The (In)discrete charm of the polyembryony. **Cellular and Molecular Life Sciences**. Vol. 64 no. 212790-2798.
47. Miodrag Grbic, Abderrahman Khila, Kwang-Zin Lee, Anica Bjelica, Vojislava Grbic, Jay Whistlecraft, Lou Verdon, Maria Navajas and Lisa Nagy (2007) Mity model: *Tetranychus urticae*, a candidate chelicerate model organism. **Bioessays** 29: 489-496.
48. Khila, A and Grbic M. (2007) Gene silencing in the spider mite *Tetranychus urticae*: dsRNA and siRNA parental silencing of the *Distal-less* gene. **Development, Genes & Evolution** 414:251-261.
49. Zhurov V and Grbic, M. (2005) Transplantation of a polyembryonic wasp embryo: a technique for transfer of an endoparasitic embryo into the host egg. **Development, Genes & Evolution** 215: 645-650.
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51. Grbic M. (2003) Polyembryony in parasitic wasps: evolution of a novel mode of development **International Journal of Developmental Biology** 47: 633-642.
52. Dearden, P.K., Grbic, M., Donly, C. (2003) Vasa expression and germ-cell specification in the spider mite *Tetranychus urticae*. **Development, Genes and Evolution** 212:599-603.
53. Dearden, P.K., Donly, C., Grbic M. (2002) Expression of pair-rule gene homologues in a chelicerate: early patterning of the Two-Spotted Spider Mite *Tetranychus urticae*.

- Development** 129: 5461-5472.
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 56. Strand MR, Grbic M (1999) Life history shifts and alterations in the early development of parasitic wasps. **Invertebrate reproduction & Development**, 36: (1-3) 51-56.
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 58. Grbic, M. and Strand, M. (1998) Shifts in the life history of parasitic wasps correlate with pronounced alterations in early development. **Proceedings National Academy of Sciences USA**, 95, 1097-1101.
 59. Grbic, M., Nagy, L. Strand, M. (1998) Polyembryonic embryogenesis: a major departure from typical insect embryogenesis. **Development, Genes and Evolution** 208, 69-81.
 60. Strand M. and Grbic, M. (1997) Development and evolution of polyembryonic insects. **Current Topics in Developmental Biology** 35, 121-160.
 61. Grbic, M., Rivers, D., Strand, M. (1997) Caste specification in the polyembryonic wasp *Copidosoma floridanum* : *in vivo* and *in vitro* analysis. **Journal of Insect Physiology** 43, 553-565.
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 63. Grbic, M., Nagy, L., Carroll, S., Strand, M. (1996) Polyembryonic development: insect pattern formation in a cellularized environment. **Development** 122, 795-804.
 64. Grbic, M, Ode, P., Strand, M. R. (1992) Sibling rivalry and brood sex ratio in polyembryonic wasps. **Nature**, Vol. 360, 254-256.
 65. Baehrecke, E.H., Grbic, M., Strand, M.R. (1992) Serosa ontogeny and in two embryonic morphs of *Copidosoma floridanum*, the role of host hormones. **Journal of Experimental Zoology** 262, 30-39.
 66. Grbic M; Strand M (1991) Intersexual variation in the precocious larvae of the polyembryonic wasp *Copidosoma floridanum*. Wajnberg, E. and S. B. Vinson (Ed.) Trichogramma and other egg parasitoids 3rd international symposium

Examples of participation in industrial innovation

Co-founder of spinoff company Nanomitech (nanomitech.com) focused on commercialization of spider mite silk (2012-present)

Invited conference presentations:

1. Grbic M. Whole genome sequencing of spider mites: from genome evolution to biotechnology and new biomaterials. International symposium of spider mite control, Southwest University, China, 5 January 2022 plenary talk
2. Grbic M. Whole genome sequencing of spider mites: from genome evolution to biotechnology and new biomaterials. University of Idaho, US, 15 October 2021
3. Grbic M. Whole genome sequencing of spider mites: from genome evolution to biotechnology and new biomaterials. University of South Carolina, US, 27 September 2021
4. Grbic M. Environmental RNA interference in two-spotted spider mite, *Tetranychus urticae* INTOMED International Symposium December 4, 2020; plenary talk <http://intomed.bio.uth.gr/intomed-symposium/>
5. Grbic M. "New nano biomaterials from the silk of mite", I Workshop on Molecular Biology of Mites in Brazil 08/march/2021 plenary talk

Workshop/conference organizer:

1. I was the organizer of all spider mite International conferences (12 so far) that I have developed and organized that includes an international spider mite research community from 4 continents. I was responsible for organizing the meetings (finding the venue, organizing lodging and transport, scientific content, inviting participants and leading the conference).

International collaboration: I am currently heavily involved in international collaboration leading or participating in several international consortia which are promoting Western's role in international science:

- 1) **Spider mite Genome Consortium:** leading international team focused on spider mite genomics as a major pest in agriculture. This involves improvement of spider mite genome annotation, new sequencing effort and collaboration with industry. My engagement involves planning, writing new grants for genome sequencing and collaboration with the industry and at least 2 Zoom/SKYPE meetings per month and International conference organization
- 2) **Spider mite Silk as a bio material Consortium:** leading this effort to develop spider mite silk as a potential drug/vaccine carrier. Includes laboratories from Western (our lab and Bogumil Karas), USA: the University of South Carolina, Spain: the University of La Rioja and IMIDA institute in Murcia. My engagement involves experimental planning, providing of material for experiments, at least 2 Zoom/SKYPE/month, developing IP and face-to-face meetings.
- 3) **Ancient DNA consortium:** I have initiated a multidisciplinary collaboration between Western, the University of Harvard (leading lab in ancient DNA research) CSIC Barcelona, Spain and the University of Belgrade in the area of archeology and ancient DNA. I am co-PI on the grant "Genomics of Neolithic Demographic Transition Eesi-Genomic" providing resources for ancient DNA sequencing. I am coordinating this effort

and I am involved in experimental planning, and organization of sample acquisition, promoting science in the press and having Zoom or direct meeting with team members.

Grants: Active:

Funding agency: Genome Canada: GENOMIC APPLICATIONS PARTNERSHIP PROGRAM (GAPP); grant title: Biopesticide with New Modes of Action for Control of Highly Polyphagous Mite Agricultural Pests in agriculture. V. Grbic (PI) & M. Grbic & Green Light Bioscience Budget \$4,109,813 CAD; Period: 2022-2026

Funding agency: Eesi-Genomics (EU); grant title: Genomics of Neolithic Demographic Transition PIs: Grbic Miodrag, Sofija Stefanovic, Carles Lalueza Fox, Toni Gabaldon Budget: Eur 120,000 Period: 2019-2021.

Funding agency: Ontario Ministry of Research and Innovation Ontario Research Fund: grant title: Genomics-based environmentally-friendly technologies for control of high-risk pests in agriculture Pest Genomics and Plant Breeding in a sustainable agricultural pest management. M. Grbic PI. Budget: **\$3,632,863** CAD Period: 2016-2022

Funding agency: NSERC Discovery Grant (Canada); grant title: Evolution of pattern formation in insects PIs: Grbic Miodrag, Budget: Eur \$236,00 Period: 2018-2024.

Funding agency: Ministry of Agriculture (Serbia); grant title: Genomics of grapevine diversity in Serbia PIs: Zeljko Tomanovic, Jose Miguel Martinez Zapater, Grbic Miodrag, Budget: Eur \$56,00 Period: 2021-2022.

Past grants:

Funding agency: FACCE-ERA-NET+ grant title: New generation sustainable tools to control emerging mite pests under climate change (GENOMITE). J. Cross (coordinator), M. Grbic (scientific leader), V. Grbic, Y. Van de Peer, I Diaz, M. Navajas, P. Castanera, M. Stavranidis, T. Van Leeuwen, L. Willmitzer. Budget: **1,745,000 EUR**, 2015-2017.

Funding agency: Natural Sciences and Engineering Research Council of Canada, grant title: Evolution of pattern formation in insects applicants: (NSERC discovery grant) Miodrag Grbic PI, amount: **\$210,00 CAD** period: 2018-2023.

Funding agency: Global Leadership in genomics and Life Sciences (GL2) Ontario Ministry of Research and Innovation 2010, grant title: Pest Genomics and Plant Breeding in a sustainable agricultural pest management. M. Grbic PI. Budget: **\$1,977,514.00** CAD Period: 2011-2014.

Funding agency Ontario Ministry of Research and Innovation Ontario Research Fund: grant title:: Genomics-based environmentally-friendly technologies for control of high-risk pests in agriculture Pest Genomics and Plant Breeding in a sustainable agricultural pest management. M. Grbic PI. Budget: **\$3,632,863** CAD Period: 2016-2020

Funding agency: FACCE-ERA-NET+ grant title: New generation sustainable tools to control emerging mite pests under climate change (GENOMITE). J. Cross (coordinator), M. Grbic (scientific leader), V. Grbic, Y. Van de Peer, I Diaz, M. Navajas, P. Castanera, M. Stavranidis, T. Van Leeuwen, L. Willmitzer. Budget: **1,745,000 EUR**, 2015-2017.

Funding agency: Natural Sciences and Engineering Research Council of Canada, grant title: Evolution of pattern formation in insects applicants: (NSERC discovery grant) Miodrag Grbic PI, amount: **\$180,00 CAD** period: 2013-2017.

Funding agency: Global Leadership in genomics and Life Sciences (GL2) Ontario Ministry of Research and Innovation 2010, grant title: Pest Genomics and Plant Breeding in a sustainable agricultural pest management. M. Grbic PI. Budget: **\$1,977,514.00 CAD** Period: 2011-2014.

Funding agency: ADF-UWO; Biotron, Grbic, M., Grbic, V; **\$ 42,823**, Period: 2010-2011.

Funding agency: **Genome Canada**; grant title: Genomics in Agricultural Pest Management (**GAP-M**); PI M. Grbic co PI: Y. van de Peer, M. Navajas, F. Ortego, I. Diaz, JM Zapater, V. Grbic; **\$6,390,093, 2009-2013**.

Funding agency: Natural Sciences and Engineering Research Council of Canada, grant title: Evolution of pattern formation in insects applicants: (NSERC discovery grant) Miodrag Grbic PI, amount: **\$227,500** period: 2007-2012.

Funding agency: DOE Community Sequencing Program Grant title: Model Chelicerate genome: whole genome sequencing of spider mite *Tetranychus urtica*. applicants: Miodrag Grbic PI, Co-PI: Maria Navajas INRA Montpellier, France, Jeffrey Boore DOE Joint Genome Institute and Lawrence Berkeley National Lab, Walnut Creek, USA, Lisa Nagy, University of Arizona, Tucson, USA, Andre Pires da Silva, University of Texas at Arlington, USA. amount: US **\$2,800,000** Period: 2006-2009.

Funding agency: Natural Sciences and Engineering Research Council of Canada, grant title: Genetic pest control: plant-generated RNAi gene knockouts in agricultural pest (NSERC Strategic grant) applicants: Miodrag Grbic PI, V. Grbic co-PI amount: **\$435,000** period: 2005-2008

Funding agency: Canadian Space Agency; grant title: Influence of environment on evolution of developmental programs in insects applicants: Miodrag Grbic PI. amount: **\$83,000** Period: 2007-2008.

Funding agency: Canadian Foundation for Innovation and Ontario Government Matching Fund. grant title: UWO Biotron (equipment grant) applicants: Norman Huner PI, Miodrag Grbic co-PI and seven others. amount: **\$28,371,122** Period: 2004-2007.

Funding agency: Natural Sciences and Engineering Research Council of Canada, grant title: Genomics of spider mite: development of a novel model organism (NSERC genomics

grant) applicants: Miodrag Grbic PI, amount: **\$45,000/year**, period: 2002-2006.

Funding agency: Natural Sciences and Engineering Research Council of Canada, grant title: Evolution of pattern formation in insects (NSERC discovery grant), applicant: Miodrag Grbic PI, amount: **\$178,184**, period: 2002-2006.

Funding agency: Ontario Ministry of Energy, Science and Technology and Technology, grant title: Transgenic technology in biological pest control (Premier's Research Excellence Award), applicant: Miodrag Grbic PI, amount: **\$150,000**, period: 2000-2005. Funding agency: Canadian Foundation for Innovation and Ontario Government Matching Fund. grant title: Molecular biology facility for embryo manipulation and genetic transformation (equipment grant) applicants: Miodrag Grbic PI, Vojislava Grbic co-PI, amount: **\$850,000** period: 1999.

Refereed articles for following journals:

Arthropod Structure and Development (2)
Acarology (2)
Gene (1)
Evolution & Development (1)
Biocontrol (1)
PLOS Genetics (1)
PLOS1 (1)
Nanomedicine (1)
Journal of Proteomics (1)
Pesticide Biochemistry and Physiology (2)
Scientific Reports (3)
International Journal of Acarology (2)
Pesticide Biochemistry and Physiology (1)
Journal of Insect Physiology (1)
Parasite&Vectors (1)

Refereed grant proposals for the following agencies:

Research Foundation Flanders (2021): The role of the microbiome relative to the genome for niche width and host adaptation

NSERC Alliance Grant (2020) Predicting the effects of climate change on the microbial and chemical control of agricultural pests such as obliquebanded leafroller in apple

H2020 expert evaluator, EU (2018/2019): Project: Neurostresspept
<http://neurostresspep.eu>

Reviewing includes reading progress reports, comparing with original grant aims (remotely), followed by on site face-to-face review session in Brussels. Following review session review assessment report was prepared and individual reports were coordinated with other reviewers and amalgamated final report was submitted to EU commission.

Membership in Professional Societies:

Genetics Society of America

Society for Developmental Biology

American Association for the Advancement of Science

February 28, 2023

A handwritten signature in blue ink, reading "M. Grbic". The signature is written in a cursive style with a checkmark at the end.