

Curriculum Vitae

Dr. Hannes Schuler

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Education

2020	Italian National Habilitation as Full Professor in the scientific discipline AGR/11 <i>General and Applied Entomology</i>
2017	Italian National Habilitation as Associate Professor in the scientific discipline AGR/11 <i>General and Applied Entomology</i>
2009 – 2012	Ph.D., Boku, Vienna. Thesis: “ <i>Diversity in the Orchard: Wolbachia communities in Rhagoletis spp.</i> ” – Supervisors: Prof. Dr. Christian Stauffer and Dr. Wolfgang Arthofer; with honors
2010	M.Sc. in Phytomedicine, Boku, Vienna; with honors
2009	M.Sc. in Agriculture, Boku, Vienna
2007	Erasmus Semester at the Università di Bologna, Bologna, Italy
2003	Enrolment at University of Natural Resources and Life Sciences, Boku, Vienna

Academic experience

10/2021 –	Associate Professor in General and Applied Entomology, Faculty of Science and Technology, Free University of Bozen-Bolzano, Italy
10/2020 –	Member of the Competence Centre for Plant Health, Free University of Bozen-Bolzano, Italy
10/2018 – 09/2021	Assistant Professor (RTDb) in General and Applied Entomology, Faculty of Science and Technology, Free University of Bozen-Bolzano, Italy
08/2017 – 08/2018	Research Assistant, Laimburg Research Centre, Vadena/Pfatten, Italy
05/2016 – 05/2017	Postdoctoral Research Fellow, Institute of Forest Entomology, Forest Pathology & Forest Protection, Boku, Vienna, Austria
08/2014 – 05/2016	Erwin Schrödinger Fellow, Department of Biological Sciences, University of Notre Dame
09/2013 – 07/2014	Research Assistant, Faculty of Science and Technology, Free University of Bozen-Bolzano, Italy
06/2012 – 08/2013	Postdoctoral Research Fellow, Institute of Forest Entomology, Forest Pathology & Forest Protection, Boku, Vienna, Austria

Language skills

German	Mother tongue
English	C1 (Toefl 102/120)
Italian	C1 (Zweisprachigkeitsprüfung A, Province BZ)

Student mentoring and supervision

2021 – 2021	Supervisor of the Master student Maja Fluch, Free University Bozen-Bolzano, title: Genetic survey of parasitoid diversity of <i>Halyomorpha halys</i> in South Tyrol
2021 –	Co-supervisor of the Master student Abdelhady Elshal, Boku, Vienna; tentative title: Horizontal transmission and infection dynamics of <i>Wolbachia</i> in <i>Rhagoletis cingulata</i>
2020 –	Supervisor of the PhD student Giulia Calia, Food Engineering and Biotechnology, Free University of Bozen-Bolzano; tentative title: Comparative Genomics of ‘ <i>Candidatus</i> <i>Phytoplasma mali</i> ’ strains to determine genetic factors of pathogenicity and invasivity
2020 –	Co-supervisor of the Master student Lukas Vonmetz, Boku, Vienna; tentative title: Spatial spread in Central Europe of <i>Wolbachia</i> strains <i>w</i> Cin 1 and <i>w</i> Cin2 in <i>Rhagoletis cingulata</i>
2019	Supervisor of the Bachelor student David Elsler, Free University Bozen-Bolzano, title: Population genetic structure of the Brown marmorated stink bug <i>Halyomorpha halys</i> in South Tyrol
2017 –	Co-Supervisor of the PhD student Daniel Bruzzese, University of Notre Dame, tentative title: The coupling of non-endosymbiont and endosymbiont reproductive isolation and its effect on population divergence and speciation.
2014 – 2018	Co-Supervisor of the PhD student Vid Bakovic, Boku, Vienna; title: Speciation contributing to the genetic population structure of the European cherry fruit fly, <i>Rhagoletis cerasi</i>
2016 – 2017	Co-Supervisor of the Master student Lukas Feldkirchner, Boku, Vienna; title: Infection dynamics of the <i>Wolbachia</i> strain <i>w</i> Cer2 in a German transect of <i>Rhagoletis cerasi</i>
2016	Supervisor of the Undergraduate student Jack Harris, University of Notre Dame
2009 – 2011	Co-Supervisor of the PhD student Bilal Rasool, Boku, Vienna; title: <i>Wolbachia</i> in Fruit Flies and its Implications for Biocontrol
2009 – 2011	Co-Supervisor of the Master students Barbara Scheuringer, Sabine Becker and Peter Kern, Boku, Vienna

Teaching experience

2021 – 2022	<i>Pflanzenschutz</i> , course of the B.Sc. Program Agricultural, Food and Mountain Environmental Sciences, Free University Bozen-Bolzano
2021 – 2022	<i>Vorratsschutz</i> , course of the B.Sc. Program Agricultural, Food and Mountain Environmental Sciences, Free University Bozen-Bolzano
2018 – 2022	<i>Theory of Scientific Method</i> , compulsory course of four PhD programs, Free University Bozen-Bolzano
2019 – 2021	<i>Insects as Pest, Feed and Food</i> , course of the Master program Food Sciences for Innovation and Authenticity, Free University Bozen-Bolzano
2019	<i>Forest Pathology and Forest Protection</i> , Summer School of the B.Sc. Program Agricultural, Food and Mountain Environmental Sciences, Free University Bozen-Bolzano
2013 – 2014	Teaching assistant of <i>Agricultural and Forest Entomology</i> , Free University Bozen-Bolzano
2008	Teaching assistant of <i>Agricultural Pest Diagnosis</i> , Boku, Vienna
2007 – 2008	Teaching assistant of <i>Plant Protection</i> , Boku, Vienna

Scientific experience

2020 –	Member of the environmental DNA working group of the Biomonitoring South Tyrol, EURAC, Italy
09/2020	Evaluator of the Dissertation of Katerina Nikolouli, Boku, Vienna

2018 -	Member of the working group Biomonitoring South Tyrol, EURAC, Italy
2018 -	Member of the PhD committee of Daniel Bruzese, University of Notre Dame, USA
2018 -	Member of the Study Council of the PhD Program “Food Engineering and Biotechnology”, Faculty of Science and Technology, Free University of Bozen-Bolzano.
2018 -	Member of the Course Council of the B.Sc. Program “Agricultural, Food and Mountain Environmental Sciences”, Faculty of Science and Technology, Free University of Bozen-Bolzano.
11/2018	Evaluator of the Dissertation of Vid Bakovic, Boku, Vienna
2017 -	Visiting Scholar, University of Notre Dame, Indiana, USA
07/2014	Invited observer at the <i>First research coordination meeting on dormancy management to enable mass-rearing and increasing efficiency of sterile insects and natural enemies</i> , held by the FAO and the IAEA, Vienna, Austria
10/2012	Guest Researcher at the University of Notre Dame, Indiana, USA, funded by the ESF <i>Frontiers in Speciation Research</i>
09/2011	COST meeting <i>Arthropod symbiosis in extreme environment</i> in Brussels, Belgium
01/2011	<i>Workshop on Molecular Evolution</i> in Český Krumlov, Czech Republic
03/2010	COST workshop <i>Advances in Symbiosis Research</i> at the Hebrew University of Jerusalem in Rehovot, Israel

Fellowships

2018	Euregio Young Researcher Award
2014	Boku Best Paper award
2012	Dr. Berthold Pohl Award, Bozen, Italy
2011	Publication award of the Gregor Mendel Society, Austria
2009	Promotion price of the foundation “120 Jahre Universität für Bodenkultur”

Research projects

2021 - 2023	The microbial community of pear psyllids and its influence on phytoplasma transmission (MiCoPePsy) – Mobility Fonds Province of Bolzano – 122,607€ Hannes Schuler (PI), Free University of Bozen-Bolzano, Italy; Liliya Serbina (coPI) Masaryk University, Brno, Czech Republic
2021 - 2022	Verbreitungsdynamik und Populationsentwicklung des Buchdruckers in den Dolomiten; Distribuzione e dinamica di popolazione del bostrico tipografo nelle Dolomiti – Interreg V-A Italy-Austria 2014-2020 CLLD Dolomiti Live – 117,000€ Hannes Schuler (PI), Christian Stauffer, Martin Schebeck, Boku, Austria, Massimo Faccoli, Andrea Battisti, University of Padova co-PI’s
2020 - 2023	Population genomics of factors influencing Phytoplasma transmission (FIGHToplasm) – Joint Projects FWF-Province BZ – 592,000€ Hannes Schuler (PI) Christian Stauffer, University of Natural Resources and applied life Sciences, Boku, Austria (co-PI), Katrin Janik, Research Centre Laimburg; Rosemarie Tedeschi University of Turin; Omar Rota-Stabelli, Fondazione Edmund Mach
2020 - 2023	International information exchange in agriculture – Erasmus+ – 60,000€ PI: Klaus Büchel (PI) Vereinigung Bäuerlicher Organisationen, Liechtenstein; Stefan Simma (coPI), Landwirtschaftskammer Vorarlberg, Austria; Hannes Schuler (coPI), Free University of Bozen-Bolzano, Italy
2020 - 2021	Die Rolle von Bakterien und Pilzen in der Verbreitungsdynamik des Buchdruckers in den Dolomiten – Ruolo di batteri e funghi simbiotici nella dinamica di diffusione del

- bostrico tipografo nelle Dolomiti (DolomIps) - Interreg V-A Italy-Austria 2014-2020
 CLLD Dolomiti Live - 50,000€
 Hannes Schuler (PI), Christian Stauffer, Martin Schebeck University of Natural Resources and applied life Sciences, Boku, Austria (co-PIs), Massimo Faccoli, Andrea Battisti, University of Padova (co-PIs)
- 2019 - 2021 The Endosymbiont Community of Insect Vectors associated with two Grapevine Yellow Pathosystems (EGYPt) - UniBZ Internal research funds - 13,500 €
 Hannes Schuler (PI), collaboration partners: Paola Riolo, Università Politecnica delle Marche; Stefanie Fischnaller, Research Centre Laimburg; Ilaria Negri, Università Cattolica del Sacro Cuore
- 2018 - 2022 Interspecific horizontal *Wolbachia* transmission in action, Austrian Science Fund (FWF) - 308,000 €
 Hannes Schuler (PI), collaboration partners: Jeffrey L Feder, University of Notre Dame, USA; Lisa Klasson, Uppsala University, Sweden; Christian Stauffer, University of Natural Resources and applied life Sciences, Boku, Austria
- 2014 - 2017 The Role of *Wolbachia* in *Rhagoletis* Fruit Fly Speciation, Erwin Schrödinger Fellowship, Austrian Science Fund (FWF) - 111,000 €
 Hannes Schuler (PI)
- 2014 Impact and evolution of the endosymbiont *Wolbachia* on *Rhagoletis* Fruit Flies, Mobility funds, Province of Bolzano, evaluated with 65/65; but rejected due to the acceptance of the Erwin Schrödinger Fellowship - 29,700 €
 Hannes Schuler (PI)
- 2012 *Wolbachia* communities in different host races of *Rhagoletis pomonella*, Travel Grant of the European Science Foundation - 1,500 €

Memberships

- 2021 - International Organisation for Biological Control (IOBC-WPRS)
 2020 - German Phytomedicine Society
 2018 - Italian Society of Entomology
 2016 - German Society of General and Applied Entomology
 2015 - Entomological Society of America
 2011 - Gregor Mendel Society Vienna
 2010 - Network of Biological Systematics Austria

Reviewer for funding organization

- 2021 National Research, Development and Innovation Office, Hungary
 2020 ISF, Israel Science Foundation
 2013 OTKA, Hungarian Scientific Research Fund
 2018 GACR, Czech Science Foundation

Editorial activities

- 2021 - Editor, Communications biology
 2019 - Insects; Topic Editor
 2020 - 2021 Special Issue Editor, Insects; Insect Symbionts: Evolution and Application

Peer review activities

Molecular Ecology (4), Ecology Letters (1), Evolution (1) Proceedings of the Royal Society of London B (1), Journal of Pest Sciences (4), PloS One (4), Insects (2), Journal of Evolutionary Biology (1), Frontiers in Genetics (1), BMC Evolutionary Biology (1), Journal of Biogeography (1), Environmental Entomology (1), Journal of Insect Science (2), Symbiosis (1), Journal of Vector Ecology (1), Bulletin of Insectology (1), Journal of Applied Entomology (1), Insect Conservation and Diversity (1)

Most important cooperation partners

Jeffrey L. Feder, University of Notre Dame (USA)
Christian Stauffer, Boku Vienna (Austria)
Katrin Janik, Laimburg Research Centre (Italy)
Lisa Klasson, Uppsala University (Sweden)
Scott P Egan, Rice University (USA)
James R Ott, Texas State University (USA)
Glen R Hood, Wayne State University (USA)
Gregory J Ragland, University of Colorado (USA)
Wee Yee, United States Department of Agriculture (USA)
James J Smith, Michigan State University (USA)
Coralie Bertheau, Université de Bourgogne Franche-Comté (France)
Andrea Battisti, University of Padova (Italy)
Massimo Faccoli, University of Padova (Italy)
Rosemarie Tedeschi, Università degli Studi di Torino (Italy)
Paola Riolo, Università Politecnica delle Marche (Italy)
Stefanie Fischnaller, Laimburg Research Centre (Italy)
Martina Falagiarda, Laimburg Research Centre (Italy)

Outreach

Pflanzen schützen? Seminar about plant protection, Wirtschaftsfachoberschule "Franz Kafka" Meran, 25.03.2021
Presentation of the Project Population genomics of factors influencing Phytoplasma transmission, Südtiroler Beratungsring für Obst- und Weinbau, 08.03.2021
Course guidance service for the high school senior classes at the Oberschule für Landwirtschaft, Auer: Presentation about my research, 16.01.2020
Organization of a student excursion for Oberschule für Landwirtschaft at the UniBZ: Presentation about my research and guided tour through the laboratories, 21.03.2019
Participation Out of the Lab: (Un)erwünschte Mitbewohner: Wie Bakterien Insekten kontrollieren. Noi Techpark, Bozen, Italy - Invited talk.

Publications

In revision

Schuler H, Dittmer J, Galli J, Borruso L, Fischnaller S, Anfora G, Rota-Stabelli O, Weil T, Janik K The microbial community of *Cacopsylla* spp. and its potential role in vector competence of phytoplasma, in revision

Schuler H, Witkowski R, Hoppe B, Mittelbach M, Bukovinszki T, van de Vossenberg B, Schwembacher S,

Andriolo A, Bełka M, Mazur A, Battisti A Recent invasion and partial eradication of *Euwallacea fornicatus* from two tropical greenhouses in Europe, in revision.

Book chapters

- Schuler H**, Unterholzner S 2021 Grüne Gentechnik / Ingegneria genetica green, In: Tappeiner U, Marsoner T, Niedrist G (Hrsg.) Landwirtschaftsreport zur Nachhaltigkeit Südtirol. Bozen, Italien: Eurac Research / Rapporto sulla sostenibilità dell'agricoltura - Alto Adige Bolzano, Italia: Eurac Research.
- Oppedisano T, Angeli G, Baldessari M, Barthel D, Dallago G, Fischnaller S, Ioriatti C, Mazzoni V, Mittelberger C, Öttl S, Panassiti B, Pedrazzoli F, Rota-Stabelli O, **Schuler H**, Tedeschi R, Weil T, Anfora G. 2020 Chapter 3 - Insect vectors, In: Janik K., Barthel D., Oppedisano T., Anfora G. (editors) Apple proliferation. A joint review. Fondazione Edmund Mach, San Michele all'Adige (TN) / Laimburg Research Centre, Ora (BZ), ISBN 9788878430549.
- Schuler H**, Doellmann MM, Lopez JA, Hood GR, Egan SP, Feder JL 2019 Target-enriched endosymbiont sequencing (TEEseq): A new high-throughput sequencing approach applied to the comprehensive characterization of endosymbionts. In: Brown S, and Pfrender ME (eds.). Insect Genomics, Methods in Molecular Biology, Springer-Nature, New York. 1858, pp. 195-212.
- Feder JL, Hood GR, Doellman MM, **Schuler H**, Miller A, Tait C, Glover MM, Meyers P 2017 Speciation, Process of. In: *Reference Module in Life Sciences* (ed. B. Roitberg). Elsevier Press.
- Schuler H**, Hood GR, Egan SP, Feder JF 2016 Modes and Mechanisms of speciation. In: *Reviews in Cell Biology and Molecular Medicine* (ed. R. Meyers). Wiley, Weinheim, Germany.

SCI publications

- Bruzzese DJ*, **Schuler H***, Wolfe T, Glover MM, Mastroni J, Doellman MM, Tait C, Yee W, Rull J, Aluja M, Hood GR, Goughnour R, Stauffer C, Nosil P, Feder JL 2021 Testing the potential contribution of *Wolbachia* to speciation when cytoplasmic incompatibility becomes associated with host-related reproductive isolation, *Molecular Ecology*.
- *equally contributing first authors
- Calvert MB, Doellman MM, Feder JL, Hood GR, Meyers P, Egan SP, Powell THQ, Glover MM, Tait C, **Schuler H**, Berlocher SH, Smit JJ, Nosil P, Hahn D, Ragland GJ 2021 The genomics of trait combinations and their influence on adaptive divergence, *Journal of Evolutionary Biology*, accepted.
- Wolfe TM, Bruzzese DJ, Klasson L, Corretto E, Lečić S, Stauffer C, Feder JL, **Schuler H** 2021 Comparative genome sequencing reveals insights into the dynamics of *Wolbachia* in native and invasive cherry fruit flies, *Molecular Ecology, Special Issue: The use of whole-genome sequences in Molecular Ecology*.
- Schuler H**, Elsler D, Fischnaller S 2020 Population genetics of the brown marmorated stink bug *Halyomorpha halys* in the early phase of invasion in South Tyrol (Northern Italy), *Bulletin of Entomological Research* 1-8.
- Barthel B, Schuler H, Galli J, Borruso L, Geier J, Heer K, Burckhardt D, Janik K 2020 Identification of Plant DNA in adults of the phytoplasma vector *Cacopsylla picta* helps understanding its feeding behavior, *Insects*, 11, 835
- Doellman MM, Saint Jean G, Egan SP, Powell THQ, Hood GR, **Schuler H**, Bruzzese DJ, Glover MM, Smith JJ, Yee WL, Goughnour R, Rull J, Aluja M, Nosil P, Feder JL 2020 Evidence for spatial clines and mixed geographic modes of speciation for North American cherry-infesting *Rhagoletis* flies. *Ecology and Evolution*. 10, 12727-12744.
- Bakovic V, Schebeck M, Stauffer C, **Schuler H** 2020 *Wolbachia*-mitochondrial DNA associations in transitional populations of *Rhagoletis cerasi*, *Insects*, 11(10), 675
- Bakovic V, **Schuler H**, Schebeck M, Feder JL, Stauffer C, Ragland GJ 2019 Host plant-related genomic differentiation in the European cherry fruit fly, *Rhagoletis cerasi*, *Molecular Ecology*, 28, 4648-4666.

- Doellman MM, **Schuler H**, Saint Jean G, Hood GR, Egan SP, Powell THQ, Glover MM, Bruzese DJ, Smith JJ, Yee WL, Goughnour RB, Rull J, Aluja M, Feder JL 2019 Geographic and Ecological Dimensions of host plant-associated genetic differentiation and speciation in the *Rhagoletis cingulata* (Diptera: Tephritidae) sibling species group, *Insects*, 10(9).
- Schebeck M, Feldkirchner L, Stauffer C, **Schuler H** 2019 Dynamics of an Ongoing *Wolbachia* Spread in the European Cherry Fruit Fly, *Rhagoletis cerasi* (Diptera: Tephritidae), *Insects*, 10(6), 172.
- Schebeck M, **Schuler H**, Einramhof B, Avtzis DN, Dowle EJ, Faccoli M, Battisti A, Ragland GJ, Stauffer C, Bertheau C 2019 The Apennines as cryptic Pleistocene refugium of the bark beetle *Pityogenes chalcographus* (Coleoptera: Curculionidae), *Biological Journal of the Linnean Society*, 127, 24–33.
- Schebeck M, Krumböck S, **Schuler H**, Stauffer C 2019 Are bacterial endosymbionts reproductive manipulators in the bark beetle *Ips acuminatus*? *Proceedings of the German Society for General and Applied Entomology*, 22.
- Schuler H**, Egan SP, Hood GR, Busbee RW, Driscoe AL, Ott JR 2018 Diversity and distribution of *Wolbachia* in relation to geography, host plant affiliation and life cycle of a heterogonic gall wasp, *BMC Evolutionary Biology*, 18:37.
Highlighted in: BMC Evol Biol, featured article: Can a simple infection affect the evolution of a host species?
- Bakovic V, Schebeck M, Telschow A, Stauffer C*, **Schuler H*** 2018 Spatial spread of *Wolbachia* in *Rhagoletis cerasi* populations, *Biology Letters*, 14(5): 20180161. *equally contributing last authors.
- Doellman MM, Ragland GJ, Hood GR, Meyers PJ, Egan SP, Powell THQ, Lazorchak P, Glover MM, Tait C, **Schuler H**, Hahn DA, Berlocher SH, Smith JJ, Nosil P, Feder JL 2018 Genomic differentiation during speciation-with-gene-flow: Comparing geographic and host-related variation in divergent life history adaptation in *Rhagoletis pomonella*, *Genes*, 9:5, 262.
- Schebeck M, Dowle EJ, **Schuler H**, Avtzis DN, Bertheau C, Feder JL, Ragland GJ, Stauffer C 2018 Pleistocene climate cycling and host plant association shaped the demographic history of the bark beetle *Pityogenes chalcographus*, *Scientific Reports*, 8:14207.
- Schebeck M, Feldkirchner L, Marín B, Krumböck S, **Schuler H***, Stauffer C* 2018 Reproductive manipulators in the bark beetle *Pityogenes chalcographus* (Coleoptera: Curculionidae) – The role of *Cardinium*, *Rickettsia*, *Spiroplasma*, and *Wolbachia*, *Journal of Insect Science*, 18(3):4.
*equally contributing last authors.
- Bakovic V, Stauffer C, **Schuler H** 2018 Allochronic isolation as a potential factor for prezygotic isolation in *Rhagoletis cerasi*, *Proceedings of the German Society for General and Applied Entomology*, 21, 67–70.
- St. Jean G, Hood GR, Egan SP, Powell THQ, **Schuler H**, Doellman MM, Glover M, Smith JJ, Yee W, Goughnour RB, Thistlewood HMA, Maxwell SA, Keyghobadi N, Rull J, Aluja M, Feder JL 2018 Limited genetic evidence for host plant-related differentiation in the Western cherry fruit fly *Rhagoletis indifferens* (Diptera: Tephritidae), *Entomologia Experimentalis et Applicata*, 166 (9), 739-751.
- Schuler H**, Köppler K, Daxböck-Horvath S, Rasool B, Krumböck S, Schwarz D, Hoffmeister TS, Schlick-Steiner BC, Steiner FM, Telschow A, Stauffer C, Arthofer W, Riegler M 2016 The hitchhiker's guide through Germany – The selective sweep of a mitochondrial haplotype of *Rhagoletis cerasi* with its invading *Wolbachia* strain. *Molecular Ecology*, 25, 1595–1609.
- Schuler H**, Kern P, Arthofer W, Vogt H, Fischer M, Stauffer C, Riegler M 2016 *Wolbachia* in parasitoids attacking native European and introduced eastern cherry fruit flies in Europe, *Environmental Entomology*, 45, 1424–1431.
- Kawasaki Y, **Schuler H**, Stauffer C, Lakatos F, Kajimura H 2016 *Wolbachia* endosymbionts in haplodiploid and diploid scolytine beetles (Coleoptera: Curculionidae: Scolytinae) *Environmental Microbiology Reports*, 8, 680–688.
- Tadeo E, Feder JL, Egan SP, **Schuler H**, Aluja M, Rull J 2014 Divergence and evolution of reproductive barriers among three allopatric populations of *Rhagoletis cingulata* across eastern North America and México. *Entomologia Experimentalis et Applicata*, 156, 301–311.
- Schuler H**, Bertheau C, Egan SP, Feder JL, Riegler M, Schlick-Steiner BC, Steiner FM, Johannesen J, Kern P, Tuba K, Lakatos F, Köppler K, Arthofer W, Stauffer C 2013 Evidence for a recent horizontal transmission and spatial spread of *Wolbachia* from endemic *Rhagoletis cerasi* (Diptera: Tephritidae) to invasive *Rhagoletis cingulata* in Europe. *Molecular Ecology*, 22, 4101–4111.

- Bertheau C, **Schuler H**, Arthofer W, Avtzis DN, Meyer F, Krumböck S, Moodley Y, Stauffer C 2013 Divergent evolutionary histories of two sympatric spruce bark beetle species. *Molecular Ecology*, 22, 3318–3332.
- Johannesen J, Keyghobadi N, **Schuler H**, Stauffer C, Vogt H 2013 Invasion genetics of American cherry fruit fly in Europe and signals of hybridization with the European cherry fruit fly. *Entomologia Experimentalis et Applicata*, 147, 61–72.
- Tuba K, **Schuler H**, Stauffer C, Lakatos F 2012 First found of the walnut husk fly, *Rhagoletis completa* (Cresson 1929) (Diptera: Tephritidae), in Hungary. *Növénnyvédelem*, 48, 419–424.
- Schuler H**, Arthofer W, Krumböck S, Bertheau C, Stauffer C 2012 *Wolbachia* Infection in the Walnut-Husk Fly *Rhagoletis completa* (Diptera: Tephritidae). *Proceedings of the German Society for General and Applied Entomology*, 18, 243–245.
- Arthofer W, Riegler M, **Schuler H**, Schneider D, Moder K, Miller WJ, Stauffer C 2011 Allele Intersection Analysis: a novel tool for multi locus sequence assignment in multiply infected hosts. *PLoS One* 6, e22198.
- Bertheau C, **Schuler H**, Krumböck S, Arthofer W, Stauffer C 2011 Hit or miss in phylogeographic analyses: the case of the cryptic NUMTs. *Molecular Ecology Resources*, 11, 1056–1059.
- Schuler H**, Arthofer W, Riegler M, Krumböck S, Köppler K, Vogt H, Teixeira LAF, Stauffer C 2011 Multiple *Wolbachia* infections in *Rhagoletis pomonella*. *Entomologia Experimentalis et Applicata*, 139, 138–144.
- Arthofer W, Krumböck S, **Schuler H**, Rasool B, Riegler M, Köppler K, Stauffer C 2009 Thirteen new microsatellite loci in the *Wolbachia* field model species *Rhagoletis cerasi* (Diptera: Tephritidae). *Molecular Ecology Resources*, 18, 3816–3839.
- Schuler H**, Arthofer W, Krumböck S, Köppler K, Vogt H, Teixeira LAF, Riegler M, Stauffer C 2009 The bacterial endosymbiont *Wolbachia* in the invasive cherry pest *Rhagoletis cingulata* (Diptera, Tephritidae). *Proceedings of the German Society for General and Applied Entomology*, 17, 99–101.

Articles in professional Journals

- Schuler H**, Elsler D, Fischnaller S 2020 Genetische Diversität, Herkunft und Verbreitung der Marmorierten Baumwanze in Südtirol. *Obstbau*Weinbau*,
- Schuler H** 2017 Fruchtfliegen – Alte Bekannte oder neue Gefahr für Südtirol? *Obstbau*Weinbau*, 10, 5–9.

Congress contributions

Invited talks

- Schuler H** 2021 The role of bacteria and fungi in the population dynamics of the European spruce bark beetle. Pre-COP26 conference “Towards climate-smart Alpine forests”, Milan, Italy – Invited talk.
- Schuler H** 2021 Auch Insekten haben eine Darmflora – Spannende Geschichten zu Symbiose, Konkurrenz und Manipulation zwischen Insekten und Mikroorganismen. Naturmuseum Bozen-Bolzano – Invited talk.
- Schuler H** 2018 Invasive Fruit Flies in Europe: Assessing the Invasion Process on three Trophic Levels. Tyrol Days of the European Region Tyrol, Alpbach, Austria – Invited talk.
- Schuler H** 2018 (Un)erwünschte Mitbewohner: Wie Bakterien Insekten kontrollieren. Out of the Lab, Noi Techpark, Bozen, Italy – Invited talk.
- Schuler H** 2017 *Wolbachia* as important factor in evolution and potential tool to control insect pests. Series of Lectures, Laimburg, Italy – Invited talk.
- Schuler H** 2017 Der bakterielle Endosymbiont *Wolbachia* in Fruchtfliegen der Gattung *Rhagoletis*. University of Natural Resources and Life Sciences, Boku, Vienna, Austria – Invited talk.

- Schuler H** 2013 Blinde Passagiere – Die Rolle des Endosymbionten *Wolbachia* in der Artbildung von Fruchtfliegen der Gattung *Rhagoletis*. *Phylogenie kontroversiell*, Naturhistorisches Museum Wien, Austria – Invited talk.
- Schuler H** 2011 Bakterielle Symbionten in Insekten – Fluch oder Segen? 66. *Entomologentagung AÖG*, Vienna, Austria – Invited talk.
- Schuler H** 2010 The endosymbiont *Wolbachia* fruit flies of the genus *Rhagoletis*: Horizontal transfer and impact in speciation *Vlth Annual Conference of the Network of Biological Systematics NOBIS*, Karl Franzens University of Graz, Austria – Invited talk.

Conference presentations

- Corretto E, Dittmer J, Trenti M, Howie JM, Serbina L, Tedeschi R, Rota-Stabelli O, Janik K, Stauffer C, **Schuler H** 2021 Einfluss von Insektengenom und Mikrobiom auf die Übertragung von Apfeltriebsucht-Phytoplasmen. 62. Deutsche Pflanzenschutztagung – digital – Talk.
- Corretto E, Dittmer J, Trenti M, Janik K, Howie JM, Wolfe T, Tedeschi R, Rota-Stabelli O, Stauffer C, **Schuler H** 2021 Population genomics of factors influencing phytoplasma transmission. XIII National Italian Congress of Entomology, online – Talk.
- Dittmer J, Corretto E, Howie JM, Stauffer C, **Schuler H** 2021 Long-read genome sequencing of two co-occurring primary endosymbionts in the psyllid *Cacopsylla melanoneura*. XIII National Italian Congress of Entomology, online – Talk.
- Schuler H, Witkowski R, Hoppe B, Mittelbach M, Bukovinszki T, Vossenber Bvd, Schwembacher S, Vannucchi PE, Andriolo A, Mazur A, Battisti A 2021 First reports of *Euwallacea fornicatus* in tropical greenhouses in Europe. XIII National Italian Congress of Entomology, online – Talk.
- Wolfe TM, Bruzzese D, Klasson L, Corretto E, Lecic S, Stauffer C, Feder JL, Schuler H 2021 *Wolbachia* Infection dynamics in the invasive *Rhagoletis cingulata* in Europe. XIII National Italian Congress of Entomology, online – Talk.
- Wolfe T, Bruzzese D, Klasson L, Corretto E, Lečić S, Stauffer C, Feder JL, Schuler H 2021 Revisiting *Wolbachia* diversity between invasive and native *Rhagoletis* cherry fruit flies in the light of comparative genomics. The 54th Population genetics group meeting, a virtual conference, hosted by the University of Liverpool – Talk.
- Schebeck M, Bakovic V, **Schuler H**, Stauffer C 2020 *Wolbachia* in der Europäischen Kirschfruchtfliege, *Rhagoletis cerasi* – Dynamik eines bakteriellen Endosymbionten in Raum und Zeit, Kolloquium der Österreichischen Gesellschaft für Entomologie, Wien, Austria – Talk.
- Schuler H**, Klasson L, Feder JL, Stauffer C 2019 Interspecific horizontal *Wolbachia* transmission between native and invasive *Rhagoletis* fruit flies in Europe. Congress of the German Society of general and applied Entomology, Halle (Saale), Germany – Talk.
- Schuler H**, Janik K, Borruso L, Galli J, Fischnaller S, Rota-Stabelli O, Anfora G, Weil T The microbial communities in *Cacopsylla* spp. (Hemiptera: Psyllidae) as a proxy for species determination. 6th Annual meeting of the Austrian Barcode of Life, Innsbruck, Austria – Lightning talk.
- Bruzzese D, **Schuler H**, Feder JL *Wolbachia* strain diversity and cytoplasmic incompatibility in western (*Rhagoletis indifferens*) and eastern cherry fruit flies (*Rhagoletis cingulata*). Entomology 2019, St. Louis, USA – Talk.
- Schebeck M, Dowle EJ, **Schuler H**, Avtzis DN, Bertheau C, Feder JL, Ragland RJ, Stauffer C 2019 Recent evolutionary history of the bark beetle *Pityogenes chalcographus*. Congress of the German Society of general and applied Entomology, Halle (Saale), Germany – Talk.
- Schebeck M, Feldkirchner L, Marín B, Krumböck S, **Schuler H**, Stauffer C 2019 Bacterial endosymbionts of the bark beetle *Ips acuminatus*. Congress of the German Society of general and applied Entomology, Halle (Saale), Germany – Poster.
- Schierano F, Schebeck M, Bakovic V, Krumböck S, Zabransky P, **Schuler H**, Stauffer C 2019 Infection dynamics of *Wolbachia* in a Czech transect of *Rhagoletis cerasi*. Congress of the German Society of general and applied Entomology, Halle (Saale), Germany – Poster.

- Schuler H**, Janik K, Rota-Stabelli O, Anfora G, Weil T 2018 The microbial community of *Cacopsylla* spp. (Hemiptera: Psyllidae), XIIth Annual Conference of the Network of Biological Systematics NOBIS, Museum of Nature South Tyrol, Bolzano, Italy – Talk.
- Schuler H**, Janik K, Rota-Stabelli O, Anfora G, Weil T 2018 Diversity and evolution of endosymbionts in *Cacopsylla* spp. (Hemiptera: Psyllidae), Xth Conference Zoological and Botanical Science in South Tyrol. Museum of Nature South Tyrol, Bolzano, Italy – Talk.
- Schuler H**, Janik K, Albanese D, Pindo M, Goremykin V, Cavalieri D, Rota-Stabelli O, Anfora G, Weil T 2018 Potential influence of the microbial community of *Cacopsylla melanoneura* (Hemiptera: Psyllidae) in phytoplasma transmission, XI European congress of Entomology, Naples, Italy – Poster.
- Bakovic V, Schebeck M, **Schuler H**, Feder JL, Stauffer C, Dowle E, Ragland GJ, 2018. Genome-wide divergence as a consequence of sympatric speciation of *Rhagoletis cerasi* host plant ecotypes. 13th Croatian Biological Congress, Porec, Croatia – Talk.
- Bakovic V, **Schuler H**, Schebeck M, Dowle E, Feder JL, Stauffer C, Ragland GJ, 2018. A genome-wide diversification analysis of *Rhagoletis cerasi* sympatric host-plant ecotypes. 2nd Joint Congress on Evolutionary Biology, Montpellier, France – Poster.
- Bruzzese D, **Schuler H**, Glover M and Feder J 2018 *Wolbachia* induced post-zygotic isolation among allopatric populations of *Rhagoletis cingulata* and *Rhagoletis indifferens*. *ESA Meeting*, Vancouver, Canada – Talk.
- Schuler H**, Stauffer C 2017 *Wolbachia*: Ein bakterieller Endosymbiont zur Bekämpfung von Schadinsekten. Alva-Tagung “Zukunft Obstbau”, Waldkirchen am Wesen, Austria – Talk.
- Schuler H**, Doellman MM, Hood GR, Yee W, Rull J, Feder JL 2017 The endosymbiont *Wolbachia* as potential incompatibility factor in cherry infesting *Rhagoletis* fruit fly species. Congress of the German Society of general and applied Entomology, Freising, Germany – Talk.
- Feldkirchner L, Krumböck S, Stauffer C, **Schuler H** 2017 Infection dynamics of the *Wolbachia* strain wCer2 in a German transect of *Rhagoletis cerasi* (Diptera: Tephritidae). Congress of the German Society of general and applied Entomology, Freising, Germany – Talk.
- Bakovic V, **Schuler H**, Schebeck M, Stauffer C 2017 The distribution of *Wolbachia* in two transition zones of *Rhagoletis cerasi* L. (Diptera, Tephritidae). Congress of the German Society of general and applied Entomology, Freising, Germany – Talk.
- Stauffer C, Schebeck M, Feldkirchner L, Marín B, Krumböck S, **Schuler H** 2017 Screening for endosymbionts affecting the reproduction of *Pityogenes chalcographus* and *Ips acuminatus*. Congress of the German Society of general and applied Entomology, Freising, Germany – Poster.
- Bakovic V, Schebeck M, Stauffer C, **Schuler H** 2017 Allochronic isolation as a potential factor for prezygotic isolation in *Rhagoletis cerasi* L. (Diptera, Tephritidae). Congress of the German Society of general and applied Entomology, Freising, Germany – Poster.
- Stauffer C, Schebeck M, Einramhof B, **Schuler H**, Krumböck S, Avtzis DN, Faccoli M, Battisti A, Bertheau C 2017 The Apennine as important glacial refugial area for the spruce bark beetle *Pityogenes chalcographus*. Congress of the German Society of general and applied Entomology, Freising, Germany – Poster.
- Schebeck M, Avtzis DN, Dowle EJ, Bertheau C, **Schuler H**, Feder JL, Ragland GJ, Stauffer C 2017 RAD sequencing helps to unravel the phylogeography of the European spruce bark beetle, *Pityogenes chalcographus*. IUFRO Ecology and Management of Bark and Wood Boring Insects: Novel risks with bark and wood boring insects in broadleaved and conifer forests, Thessaloniki, Greece – Talk.
- Schebeck M, Dowle EJ, Avtzis, DN, Bertheau C, **Schuler H**, Feder JL, Ragland GJ, Stauffer C 2017 RAD Sequencing helps to unravel the phylogeography of the spruce bark beetle *Pityogenes chalcographus* (L.). NOBIS Austria, Young Researchers' Day 2017, Vienna, Austria – Talk.
- Schebeck M, Dowle EJ, Feder JL, **Schuler H**, Avtzis DN, Bertheau C, Stauffer C, Ragland GJ 2017 Population genomics of the European spruce bark beetle, *Pityogenes chalcographus*. Western Forest Insect Work Conference, Jackson, USA – Talk.

- Schebeck M, Einramhof B, **Schuler H**, Krumböck S, Avtzis D, Faccoli M, Battisti A, Bertheau C, Stauffer C 2017 The Apennine as source of haplotype diversity in the spruce bark beetle *Pityogenes chalcographus*. IUFRO Ecology and Management of Bark and Wood Boring Insects: Novel risks with bark and wood boring insects in broadleaved and conifer forests, Thessaloniki, Greece – Poster.
- Schuler H** 2016 The infection dynamics of *Wolbachia* between native and invasive *Rhagoletis* fruit flies in Europe. Facing the invasion of Alien Arthropod Species, Trento, Italy – Talk.
- Schuler H**, Feder JL 2016 Der Endosymbiont *Wolbachia* als möglicher Faktor in der Evolution amerikanischer Kirschfruchtfliegen. Xth Annual Conference of the Network of Biological Systematics NOBIS, Schlossmuseum, Linz – Talk.
- Schuler H** 2016 Diversity and distribution of the endosymbiont *Wolbachia* in cherry infesting *Rhagoletis* fruit flies and its potential impact in speciation. IXth Conference Zoological and Botanical Science in South Tyrol. Museum of Nature South Tyrol, Bolzano, Italy – Talk.
- Schuler H**, Doellman MM, Hood GR, Glover M, Yee W, Rull J, Aluja M, Egan SP, Feder JL 2015 The potential role of *Wolbachia* as an incompatibility factor between cherry infesting *Rhagoletis* fruit fly species. *ESA Meeting*, Minneapolis, USA – Talk.
- Schuler H**, Doellmann MM, Lopez JA, Hood GR, Egan SP, Feder JL 2015 Target enriched Double Digest RADseq a novel approach for the high resolution characterization of the endosymbiont *Wolbachia*. *13th Ecological Genomic Symposium*, Manhattan, KS – Poster.
- Bakovic V, Schebek M, Krumböck S, Stauffer C, Ragland G, **Schuler H** 2015 The potential role of ecological adaptation and *Wolbachia* infection in the diversification of *Rhagoletis cerasi*. *XIIth Croatian Biological Congress*, Sveti Martin na Muri, Croatia – Poster.
- Schuler H**, Tadeo E, Saint Jean G, Rull J, Aluja M, Egan SP, Stauffer C, Feder JL 2014 *Wolbachia* as incompatibility factor between *Rhagoletis* populations from North America and Mexico. *VIIIth International Wolbachia Conference*, Innsbruck, Austria – Poster.
- Schuler H**, Köppler K, Daxböck-Horvath S, Rasool B, Krumböck S, Schwarz D, Hoffmeister TS, Schlick-Steiner BC, Steiner FM, Stauffer C, Arthofer W, Riegler M 2014 The history and ongoing invasion of *Wolbachia* in European *Rhagoletis cerasi* populations. *VIIIth International Wolbachia Conference*, Innsbruck, Austria – Poster.
- Bertheau C, **Schuler H**, Arthofer W, Avtzis DN, Mayer F, Krumböck S, Moodley Y, Stauffer C 2014 Divergent evolutionary histories of two sympatric spruce bark beetle species. *EU COST Action: FPI002 PERMIT Pathway Evaluation and pest Risk Management In Transport. Final Conference and Management Committee Meeting*, Estoril, Portugal – Talk.
- Fernandez Ferrari CM, Pattamayutanon P, **Schuler H**, Fontana P, Malagnini V, Chantawannakul P, Angeli S 2014 Honey bees as sentinels of the environment: bee health, pesticides, environmental pollution and parasites. *Thai-Italian Conference on Food and Agriculture for Sustainable Upland Development*, Chiang Mai University, Thailand – Talk.
- Rasool B, **Schuler H**, Qureshi N, Stauffer C 2014 The Occurrence of the Endosymbiont *Wolbachia* in *Bactrocera dorsalis* in Pakistan. *Entomology 2014 – 62nd Annual Meeting of the Entomological Society of America*, Portland, USA – Talk.
- Schuler H**, Riegler M, Arthofer W, Stauffer C 2013 The impact of the endosymbiont *Wolbachia* on the evolution of *Rhagoletis* fruit flies. *Symposium international entomofaunisticum Europae centralis XXIII*, Bozen/Bolzano, Italy – Talk.
- Schuler H**, Egan SP, Arthofer W, Rull J, Aluja M, Stauffer C, Feder JL 2013 The potential contribution of the endosymbiont *Wolbachia* to speciation-with-gene-flow in *Rhagoletis* fruit flies. *IIth BioSyst. EU meeting*, Vienna, Austria – Talk.
- Schuler H**, Bertheau C, Egan SP, Feder JL, Johannesen J, Riegler M, Köppler K, Schlick-Steiner BC, Steiner FM, Arthofer W, Stauffer C 2012 Recent horizontal transfer of *Wolbachia* between *Rhagoletis cerasi* and the invasive *Rhagoletis cingulata* and its dynamic influence on the new host. *VIIth International Wolbachia Conference*, Oléron, France – Poster.

- Arthofer W, Peschl P, **Schuler H**, Stauffer C, Steiner FM, Schlick-Steiner BC 2012 De novo characterization of *Wolbachia* communities using a combination of high-resolution melting analysis and Sanger sequencing *VIIth International Wolbachia Conference*, Oléron, France – Poster.
- Schuler H**, Arthofer W, Riegler M, Bertheau C, Köppler K, Vogt H, Teixeira LAF, Stauffer C 2011 Multiinfection of *Wolbachia* in two host species of *Rhagoletis pomonella*. *Tagung der Deutschen Gesellschaft für allgemeine und angewandte Entomologie*, Berlin, Germany – Poster.
- Schuler H**, Arthofer W, Krumböck S, Bertheau C, Stauffer C 2011 *Wolbachia* infection in the Walnut-Husk Fly *Rhagoletis completa* (Diptera: Tephritidae). *Tagung der Deutschen Gesellschaft für allgemeine und angewandte Entomologie*, Berlin, Germany – Poster.
- Becker S, Scheuringer B, **Schuler H**, Mayer F, Bertheau C, Krumböck S, Arthofer W, Grégoire J-C, Stauffer C 2011 The endosymbiont *Wolbachia* in *Rhizophagus grandis* and its prey *Dendroctonus micans*. IUFRO WP.7.03.05 - *Ecology and Management of Bark and Wood Boring Insects: Novel risks with bark and wood boring insects in broadleaved and conifer forests*, Sopron, Hungary – Poster.
- Bertheau C, **Schuler H**, Krumböck S, Arthofer W, Stauffer C 2011 Hit or miss in phylogeographic analyses: the case of the cryptic NUMTs. *Workshop of Genetics of Bark Beetles and Associated Microorganisms*, Sopron, Hungary – Talk.
- Bertheau C, **Schuler H**, Krumböck S, Arthofer W, Stauffer C 2011 Phylogeography of the European spruce bark beetle *Ips typographus* (Coleoptera, Scolytinae). IUFRO WP.7.03.05 - *Ecology and Management of Bark and Wood Boring Insects: Novel risks with bark and wood boring insects in broadleaved and conifer forests*. Sopron, Hungary – Talk.
- Hintsteiner W, Bertheau C, Avtzis DN, Arthofer W, **Schuler H**, Stauffer C 2011 The phylogeographic analysis of a Dinaric and Siberian population from *Pityogenes chalcographus* (Coleoptera, Scolytinae) *Tagung der Deutschen Gesellschaft für allgemeine und angewandte Entomologie*, Berlin, Germany – Poster.
- Riegler M, Morrow JL, Sutton TL, Frommer M, Shearman DCA, Schneider D, Miller WJ, **Schuler H**, Stauffer C, Arthofer W 2011 What can we learn from the *Wolbachia* symbioses of true fruit flies? *Genetic Society of AustralAsia. Annual Conference*, Melbourne, Australia – Talk.
- Schaidreiter R, **Schuler H**, Krumböck S, Stauffer C, Bertheau C 2011 Phylogeographic analysis of palearctic *Ips cembrae* populations. *Workshop of Genetics of Bark Beetles and Associated Microorganisms*, Sopron, Hungary – Talk.
- Stauffer C, **Schuler H** 2011 Molekulare Ökologie in der Forstentomologie: Der bakterielle Endosymbiont *Wolbachia* im Kupferstecher *Präsentation von geförderten Projekten der Stiftung 120 Jahre Universität für Bodenkultur*, Vienna, Austria – Talk
- Stauffer C, **Schuler H** 2011 Molekulare Ökologie in der Biodiversitätsforschung. *Zukunftstrends der Integrativen Biodiversitätsforschung*, BOKU Wien, Vienna, Austria – Talk
- Schuler H**, Arthofer W, Riegler M, Köppler K, Vogt H, Teixeira LAF, Stauffer C 2010 Diversity in the orchard: The multitude of *Wolbachia* in *Rhagoletis* fruit flies. *VIth International Wolbachia Conference in Asilomar*, California, USA – Talk.
- Schuler H**, Arthofer W, Riegler M, Stauffer C 2010 The diapause of *Rhagoletis cerasi* and its impact on *w*Cer density. *VIth International Wolbachia Conference*, Asilomar, California, USA – Poster.
- Arthofer W, Riegler M, Avtzis DN, **Schuler H**, Schneider D, Miller WJ, Stauffer C 2010 How not to be seen: *Wolbachia* and low titer infections. *VIth International Wolbachia Conference*, Asilomar, California, USA – Poster.
- Schuler H**, Arthofer W, Riegler M, Krumböck S, Köppler K, Vogt H, Teixeira LAF, Stauffer C 2010 The bacteria *Wolbachia* in the Apple Maggot and the American Cherry Fruit Fly. *VIth Conference Zoological and Botanical Science in South Tyrol. Museum of Nature South Tyrol*, Bolzano, Italy – Talk.
- Rasool B, Arthofer W, **Schuler H**, Riegler M, Mirak TN, Stauffer C 2010 *Wolbachia* in European, Persian and Russian *Rhagoletis cerasi* (Diptera, Tephritidae) populations. *8th International Symposium on fruit flies*, Valencia, Spain – Talk.
- Schuler H**, Arthofer W, Köppler K, Vogt H, Teixeira LAF, Riegler M, Stauffer M 2009 *Wolbachia* in *Rhagoletis* spp. *Tagung der Deutschen Gesellschaft für allgemeine und angewandte Entomologie*, Göttingen, Deutschland – Poster.