CURRICULUM VITAE

University of Idaho

NAME: Alexander V. Karasev **DATE:** December 21, 2023

RANK OR TITLE: The University Distinguished Professor

DEPARTMENT: Entomology, Plant Pathology, and Nematology

OFFICE LOCATION AND CAMPUS ZIP: AGRICULTURAL BIOTECHNOLOGY BUILDING 422, Room 105, MS 2329
OFFICE PHONE: (208) 885-2350
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EMAIL: akarasev@uidaho.edu

DATE OF FIRST EMPLOYMENT AT UI: February 21, 2006

DATE OF PRESENT RANK OR TITLE: July 1, 2022

DATE OF TENURE: July 1, 2011

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D, Moscow State University (Russia), 1985.
B.S., Moscow Academy of Veterinary Medicine (Russia), 1979.

EXPERIENCE:

Academic:

Distinguished Professor, University of Idaho. (July 1, 2022 - Present): Research on plant virus diseases in crops important in Idaho, e.g. potato, legumes, sugar beet, and grapevines, with the overall goal to control and manage plant viruses in the state of Idaho. Basic research program on virus-host interactions and genetic factors involved in plant virus disease induction and insect transmission. Applied program on virus epidemiology, detection, and strain differentiation. Teaching a graduate plant virology course (PlP 511).

Professor, University of Idaho. (July 1, 2014 - Present): Research on plant virus diseases in crops important in Idaho. Teaching a graduate plant virology course (PlP 511), and plant science graduate seminar (PlSc 501, through Spring 2017).

Associate Professor, University of Idaho. (July 1, 2011 – June 2014): Research on plant virus diseases in crops important in Idaho. Teaching a graduate plant virology course (PlSc 511), and plant science graduate seminar (PlSc 501).

Assistant Professor, University of Idaho. (February 21, 2006 – June 2011): Research on plant virus diseases in crops important in Idaho. Teaching a graduate plant virology course (PlSc 511) and plant science graduate seminar (PlSc 501).

Assistant Professor, Thomas Jefferson University. Philadelphia (September 8, 1998 - February 17, 2006): Research on utilizing plant viruses as vectors for production of biomedicals and other value-added products in plants. Expression of functionally active vaccine components and therapeutic antibodies in tobacco and spinach.

Assistant in Plant Virology, University of Florida, Lake Alfred (September 1994 – September 1998): Research on molecular biology of *Citrus tristeza virus* and other closteroviruses affecting tropical fruits and vegetables – virus-host interactions and insect vector transmission.

Postdoctoral Research Associate, University of Florida, Lake Alfred (January 1994 – September 1994): Research on molecular biology of *Citrus tristeza virus* and other closteroviruses affecting tropical fruits and vegetables – virus-host interactions and insect vector transmission.

Postdoctoral Research Associate, University of California, Riverside (January 1992 – December 1993): Research on molecular biology of *Citrus tristeza virus* and other closteroviruses affecting tropical fruits and vegetables – virus-host interactions and insect vector transmission.

Senior Researcher, Institute of Microbiology, Moscow, Russia (1991-1997): Research on molecular biology of *Beet yellows virus* and other plant viruses affecting vegetables.

Researcher, Institute of Microbiology, Moscow, Russia (1988-1991): Research on molecular biology of *Beet yellows virus* and other plant viruses affecting vegetables.

Junior Researcher, Institute of Microbiology, Moscow, Russia (1984-1988): Research on molecular biology of *Beet yellows virus*.

Governmental:

Visiting Scientist, USDA-ARS Pacific West Station, Salinas, CA (October 1997 – November 1997): Research on whitefly-transmitted closteroviruses affecting vegetables in California.

TEACHING ACCOMPLISHMENTS:

Areas of Specialization:

Plant viruses, virus diseases of plants, virus-host interactions. Broad area of interests includes molecular genetic factors of plant viruses responsible for symptom induction, vector transmission, and evolution of viruses. Methods to detect and differentiate plant viruses and virus strains.

Courses Taught:

- PlP 511, Plant Virology course is taught 100% by me (since 2015, Spring of odd years)
- PlSc 511 course was taught jointly with H. Pappu (50%) as cross-listed with WSU PlP511 (Spring 2007, 2009, 2011, 2013)
- PlSc 501 course was co-taught (50%) with R. Tripepi (Fall 2007/Spring 2008), and with J. Chen (Fall 2008/Spring 2009 and Fall 2009/Spring 2010); it was taught 100% by me in Fall 2010/Spring 2011, Fall 2011/Spring 2012, Fall 2012/Spring 2013, Fall 2013/Spring 2014, Fall 2014/Spring 2015, Fall 2015/Spring 2016, and Fall 2016/Spring 2017
- PlP 535/CS 512 (WSU) course was team-taught with S. Hulbert and other WSU faculty in Spring 2012 (my share 10%)

Number	Title	Enrollment	Credit Hours
Spring 2007			
43367 PlSc511-01	Viruses and Virus Diseases of Plants	10	4.0
Fall 2007			
13444 PlSc 501-01	Plant Science Seminar	9	1.0
Spring 2008			
43360 PlSc 501-01	Plant Science Seminar	6	1.0
Fall 2008			
13444 PlSc 501-01	Plant Science Seminar	11	1.0
Spring 2009			
13444 PlSc 501-01	Plant Science Seminar	2	1.0
43367 PlSc511-01	Viruses and Virus Diseases of Plants	14	4.0
63869 PlSc 398-05	INTERN: Molecular Plant Pathology	1	3.0
Summer 2009			
80978 PlSc 398-05	INTERN: Molecular Plant Pathology	2	3.0

Fall 2009			
13444 PlSc 501-01	Plant Science Seminar	7	1.0
34028 PlSc 398-15	INTERN: Molecular Plant Pathology	3	3.0
Spring 2010			
13444 PlSc 501-01	Plant Science Seminar	5	1.0
61802 ENVS 499-40	DS: Molecular Plant Pathology	1	3.0
Fall 2010			
13444 PlSc 501-01	Plant Science Seminar	4	1.0
Spring 2011			
13444 PlSc 501-01	Plant Science Seminar	5	1.0
43367 PlSc511-01	Viruses and Virus Diseases of Plants	27	4.0
Fall 2011			
13444 PlSc 501-01	Plant Science Seminar	11	1.0
Spring 2012			
13444 PlSc 501-01	Plant Science Seminar	6	1.0
PlSc 590-01	Potato Production	12	3.0
PlP 535/CS 512 (WSU)	Molecular Genetics of Plant-Pathogen Interactions	30	3.0
Fall 2012			
13444 PlSc 501-01	Plant Science Seminar	11	1.0
36004 PlSc 502-01	DS: Molecular Plant Pathology	4	3.0
Spring 2013			
13444 PlSc 501-01	Plant Science Seminar	3	1.0
PlP 511/PlSc511-01 (WSU)	Viruses and Virus Diseases of Plants	10	4.0
Fall 2013			
13444 PlSc 501-01	Plant Science Seminar	7	1.0
37527 PlSc 398-01	INTERN: Molecular Plant Pathology	1	3.0
Spring 2014			
43360 PlSc 501-01	Plant Science Seminar	7	1.0
Fall 2014			
13444 PlSc 501-01	Plant Science Seminar	4	1.0
36004 PlSc 502-01	DS: Molecular Plant Pathology	2	3.0
37527 PlSc 398-01	INTERN: Molecular Plant Pathology	1	3.0
Spring 2015			
13444 PlSc 501-01	Plant Science Seminar	8	1.0
69823 PlSc 502-01	DS: Plant Virology	4	4.0
68979 PlSc 402-01	UG: Research in Plant Science	1	3.0
Fall 2015			
13444 PlSc 501-01	Plant Science Seminar	7	1.0
36004 PlSc 502-01	DS: Molecular Plant Pathology	1	3.0
68979 PlSc 402-01	UG: Research in Plant Science	1	3.0

Spring 2016			
13444 PlSc 501-01	Plant Science Seminar	12	1.0
Fall 2016			
13444 PlSc 501-01	Plant Science Seminar	11	1.0
37527 PlSc 398-01	INTERN: Molecular Plant Pathology	1	1.0
Spring 2017			
13444 PlSc 501-01	Plant Science Seminar	8	1.0
69823 PlSc 502-01	DS: Plant Virology	4	4.0
71899 PlSc 502-05	DS: Plant Virology (distance course)	4	3.0
Spring 2019			
69823 PlSc 511-01	DS: Plant Virology	4	4.0
71899 PlSc 502-05	DS: Plant Virology (distance course)	4	3.0
Spring 2021			
73217 PlP 511-01	Virus Diseases of Plants	6	3.0
75412 PlP 512-01	Virus Diseases of Plants Laboratory	2	1.0
Fall 2022			
44850 PlP 404-05	ST: Undergraduate Research	1	3.0
Spring 2023			
77145 PlP 511-02	Virus Diseases of Plants	3	3.0
77150 PlP 511-03	Virus Diseases of Plants (distance course)	3	3.0
75419 PlP 512-01	Virus Diseases of Plants Laboratory	3	1.0

Students Advised:

Undergraduates:

Student Mentoring (2007-2020)

Students Engaged in Your On-Going Research Activities:

Jenny Rowley (Durrin) (Biology), 2007-2010, graduated with B.S. in 2010
Zachary Sielaff (Agric. Eng.), 2008–2010, graduated with B.S. in 2010
Anita Shrestha (Env. Sci.), 2008-2009, graduated with B.S. in 2009
Briana Fonnesbeck (Education), 2008-2010, graduated with B.S. in 2010
Eunice Kanuya (Env. Sci.), 2009-2010, graduated with B.S. in 2010
Heidi Fingerson (Animal Sci.), 2009-2010, graduated with B.S. in 2010
Arturo Quintero Ferres (Plant Mol. Biol., exchange student - Mexico), 2008-2010, graduated from University of Guadalajara in 2010 with a B.S. equivalent
Cassandra Sago (Animal Sci.), 2010-2012, graduated with B.S. in 2012
Daniel Roop (Agric. Eng.), 2010-2011, graduated with B.S. in 2011
Brandon Thompson (Biology), 2012-2013, graduated with B.S. in 2013
Melena Suliteanu (Biology, Macalister College), 2013
Lisa Tran (Biology), 2014, graduated with B.S. in 2014
Archana Shrestha (Eng.), 2011-2013
Dalton Vander Pol (Biology), 2013-2015, graduated with B.S. in 2015
Carlos Galicia (Biology), 2014-2015, graduated with B.S. in 2015
Alicia Hodnik (Biology), 2013-2016, graduated with B.S. in 2016
Jeffrey Chojnacky (Env. Sci.), 2012-present
Sarah Seubert (PSES), 2016-2018
Tanya Herrera (Biology), 2017-2018
Jennifer Chan (Plant Science), 2018, graduated with B.S. in 2018

Zachary Asher (Plant Science), 2018-2019
Miriam Robertson (Biology, College of Southern Nevada), 2019
Nathaniel Palmer (Computer Science), 2020, graduated with B.S. in 2021
Fisher Ries (Plant Science), 2021-2022, graduated with B.S. in 2022
Youmee Lee (Animal Sci.), 2021-2022
Kaleigh Wald (Biology), 2022-2023
Faith Pinney (Biology, Calif. Institute of Technology), 2022, graduated with B.S. in 2023
Sigma Bhusal (…), 2023
Grace Hess (Agric. Engeniering), 2023

Graduates:

Student Advising (2006-2020)

Doctoral Degree Committees:

Sanchita Haldar (PlP - WSU),
Esther Ngumbi (Entomology).
Jeffrey Lacey [Plant Science (PlSc); Ph.D. in 2009],
Sahar Eid [Plant Pathology (PlP) – Washington State University (WSU); Ph.D. in 2010],
Dan Villamor [Plant Pathology (PlP) – Washington State University (WSU); Ph.D. in 2012],
Christie Almeida [Plant Pathology (PlP) – Washington State University (WSU); Ph.D. in 2012],
Yu-Hsuan Lin [Plant Pathology (PlP) – Washington State University (WSU); Ph.D. in 2012],
Junli Zhang (PlSc) [Plant Science (PlSc); Ph.D. in 2013],
Laura Ingwell [Entomology (ENT); Ph.D. in 2014],
Diego Viteri [Plant Science (PlSc); Ph.D. in 2014],
Khalid Naveed [Plant Pathology (PlP) – Washington State University (WSU); Ph. D. in 2014],
Jaty Adiputra [Plant Pathology (PlP) – Washington State University (WSU); Ph. D. in 2017],
Karin Cruzado [Entomology (ENT); Ph.D. in 2019],
Jn Bertrand Contina [Plant Science (PlSc); Ph.D. in 2019],
Sandesh Dangi (Plant Science) [Plant Science (PlSc); Ph.D. in 2022],
Kelie Yoho (EPPN)
Lindsay Schulz (EPPN)
Bhupendra Bhatta (EPPN)

Doctoral Students as Major Professor:

Edison Reyes-Proano (PlSc)
Lisa T. Tran (PlSc)
Mariana Rodriguez-Rodriguez (PlSc), Ph.D. in 2021
Arturo Quintero (PlSc), Ph.D. in 2015
Xue Feng (PlSc), Ph.D. in 2014
Suellen Galvino-Costa (Plant Pathology, University of Lavras, Brazil), Ph.D. in 2011
Xiaojun Hu [Bioinformatics and Computationaal Biology (BCB)], Ph.D. in 2009
Hui Hou (PlSc)
Heyan Huang (PlSc)
Muhammad Uzman (PlSc)

Master's Degree Committees - Thesis:

Nathan Gelles (PlSc) [Plant Science; M.S. in 2023]
Wesley Bills (EPPN)
Miranda Harrison (EPPN)
Markus Andros (PlSc) [Plant Science; M.S. in 2017]
Damon Huseby (Entomology) [Entomology; M.S. in 2013],

Sunil Paudel (Entomology) [Entomology; M.S. in 2013]
Brad Stokes (PlSc) [Entomology; M.S. in 2012]
Mackenzie Ellison (PlSc) [Plant Science; M.S. in 2017]
Cole Harder (PlSc)
Lianzhou Cui [Microbiology, Molecular Biology and Biochemistry (MMBB)].

Master's Students as Major Professor:
Cesar Reyes (PlP), M.S. in 2020
Brandon Thompson (PlSc), M.S. in 2019
Gardenia Orellana (PlSc), M.S. in 2019
Lisa Tran (PlSc), M.S. in 2018
Cassandra Funke (PlSc), M.S. in 2017
Hayam Alruwaili (PlSc), M.S. in 2016
Jenny Rowley (Durrin) (PlSc), M.S. in 2014
Kelsie Evans (BCB), M.S. in 2014
Eunice Kanuya (PlSc), M.S. in 2012
Arturo Quintero (PlSc), M.S. in 2012
B. Scott Blades (PlSc), M.S in. 2011

Student Mentoring
Students Engaged in Your On-Going Research Activities:
Edison Reyes-Proano (PlSc)
Lisa T. Tran (PhD – PlSc)

Courses Developed:

13444 PlSc 501-01, Plant Science Seminar. (Fall 2007).
43367 PlSc 511-01, Viruses and Virus Diseases of Plants. (Spring 2007).
63869 PlSc 398-05, Internship – Molecular Plant Pathology. (Spring 2009).
61802 ENVS 499-40, Directed Study – Molecular Plant Pathology. (Spring 2010).
82188 PlSc 502-01, Directed Study – Molecular Plant Pathology. (Summer 2012).
69823 PlSc 502-01, Directed Study – Plant Virology. (Spring 2015).
73217 PlP 511-01, Virus Diseases of Plants. (Spring 2021).
75412 PlP 512-01, Virus Diseases of Plants Laboratory (Spring 2021).
44850 PlP 404-05, Special Topics: Undergraduate research (Fall 2022)

Non-Credit Classes, Presentations, Workshops, Seminars, Invited Lectures, etc.:

Invited seminar: Discovery of new viruses through the use of high-throughput sequencing (HTS): the Idaho experience. Department of EPPN, University of Idaho, Moscow, ID (October 31, 2022)

Invited seminar: *Potato virus Y* in potato: an old and persistent problem. Department of Plant Pathology, University of California, Davis, CA (March 8, 2020)

Invited seminar: *Potato virus Y* in potato: an overview of the problem. Department of Plant Pathology, University of Nebraska, Lincoln, NE (September 30, 2019)

Team-teaching a 6-day intensive course on “Biology of Vector-borne Disease”, University of Idaho, Moscow. (June 2019).

Team-teaching a 6-day intensive course on “Biology of Vector-borne Disease”, University of Idaho, Moscow. (June 2018).

Invited lecture: Genetic diversity and evolution of *Potato virus Y*, 3rd International Congress of Biotechnology and Biodiversity (III CIBB), Guayaquil, Ecuador. (October 13, 2016).

Invited lecture: A global overview of biological and molecular research on *Potato virus Y*. R.E.F. Matthews Memorial Lecture, 12th Australasian Plant Virology Workshop, Fremantle, Western Australia. (September 17, 2015).

Invited seminar: Resistance to *Potato virus Y* in potato and classification of PVY strains. Department of Plant Pathology, University of Helsinki, Helsinki, Finland. (March 2, 2015).

Invited lecture: Strain-specific resistance against PVY in potato. J.R. Simpot Company, Plant Sciences Division, Boise, ID, US (March 25, 2015)

Invited seminar: Genetic diversity of *Potato virus Y*. Department of PSES, University of Idaho, Moscow, ID, US. (February 28, 2013).

Invited lecture: Research on Plant Viruses in Idaho. Faculdad de Ciencias Agrotecnologicas at the Universidad Autonoma de Chihuahua, Chihuahua,Mexico (September 5, 2012)

Invited seminar: Plant virus research in Idaho. Agdia, Inc., Elkhart, IN (July 12, 2012)

Invited seminar: Interplay between long-distance transport and vector transmission in phloem-limited plant viruses. Department of Plant Pathology, University of Arkansas, Fayetteville, AR (April 3, 2012)

Invited presentation: Genetic diversity of *Potato virus Y*: a new challenge for plant quarantine services. Citrus Research Board workshop "New Technologies", Berkeley, CA (February 24, 2011)

Invited seminar: Genetic diversity of *Potato virus Y*, Department of Phytopathology, University of Lavras, Lavras, Minas Gerais, Brazil (August 20, 2010).

Invited plenary lecture: Genetic diversity of *Potato virus Y*: a new challenge for plant quarantine services, 43rd Brazilian Congress of Phytopathology, Cuiabá –MT, Brazil. (August 16, 2010).

Invited seminar: Biotechnology and Genetic Engineering in Plants, Department of PSES, University of Idaho, Moscow, ID, US. (February 18, 2010)

Invited seminar: *Potato virus Y*: an old virus and a new problem, Department of Plant Pathology, University of California, Davis, CA, US. (January 25, 2010)

Invited seminar: Sequencing the North American collection of *Potato virus Y* isolates, Department of Agricultural Microbiology, Universidad Autonoma de Chihuahua, Chihuahua, Mexico. (August 17, 2009).

Invited seminar: *Potato virus Y*: Diversity and New Necrotic Strains, Department of PSES, University of Idaho, Moscow, ID, US. (April 23, 2009).

Invited seminar: *Potato virus Y*: Diversity and New Necrotic Strains, Department of Plant Pathology, Washington State University, Pullman, WA, US. (December 8, 2008).

Invited guest lecture: *Potato virus Y*: Diversity in Idaho and new necrotic strains, Institut National de la Recherche Agronomique (INRA), Rennes, France. (June 16, 2008).

Invited seminar: Plant virus research in Idaho, Department of Plant Pathology, University of Florida, Lake Alfred, FL, US. (May 5, 2008).

Invited guest lecture cycle: Select topics in plant virology, a series of 5 lectures. National Center for Biotechnology of Kazakhstan, Astana, Kazakhstan. (September 24-28, 2007).

Invited seminar: Plant virus vectors: turning enemies into allies, Department of MMBB, University of Idaho, Moscow, ID, US. (September 14, 2006).

SCHOLARSHIP ACCOMPLISHMENTS:

Publications, Exhibitions, Performances, Recitals:

Refereed:

Book Chapters:

Parker, T., Acosta-Gallegos, J., Beaver, J., Brick, M., Brown, J.K., Cichy, K., Debouck, D.G., Delgado-Salinas, A., Dohle, S., Ernest, E., Estevez de Jensen, C., Gomez, F., Hellier, B., **Karasev, A.V.**, Kelly, J.D., McClean, P., Miklas, P., Myers, J.R., Osorno, J.M., Pasche, J.S., Pastor-Corrales, M.A., Porch, T., Steadman, J.R., Urrea, C., Wallace, L., Diepenbrock, C.H., and Gepts, P. (2023). Chapter 6. Genetic resources and breeding priorities in Phaseolus beans: vulnerability, resilience, and future challenges. In: *Plant Breeding Reviews, Volume 46 (First Edition, ed. Irwin Goldman)*. Wiley & Sons, Inc.; pp. 289-420 (https://doi.org/10.1002/9781119874157.ch6).

Chikh-Ali, M. and **Karasev, A.V.** 2023. Virus diseases of potato and their control. Chapter 11 in: *Potato Production Worldwide (Eds., Caliskan, M.E., Bakhsh, A., and Jabran, K.),* Elsevier, Inc.: London, San Diego, Cambridge, Oxford; pp. 199-211.

Lacomme, C., Glais, L., Bellstedt, D.U., Dupuis, B., **Karasev, A.V.**, and Jacquot, E., editors (2017) Potato virus Y: biodiversity, pathogenicity, epidemiology and management. Springer: Cham, Switzerland; a book with 9 chapters, 261pp.

Glais, L., Chikh-Ali, M., **Karasev, A.V.**, Kutnjak, D., and Lacomme, C. (2017) Chapter 5. Detection and diagnosis of PVY. In: Lacomme, C., Glais, L., Bellstedt, D.U., Dupuis, B., Karasev, A.V., and Jacquot, E., editors. Potato virus Y: biodiversity, pathogenicity, epidemiology and management. Springer: Cham, Switzerland; pp. 103-139.

Chikh-Ali, M. and **Karasev, A.V.** (2015) Immunocapture-Multiplex RT-PCR for the Simultaneous Detection and Identification of Plant Viruses and Their Strains: Study Case, *Potato virus Y* (PVY). Chapter 14. *In*: Plant Pathology: Techniques and Protocols, Methods in Molecular Biology (C. Lacomme, editor), Springer: New York, NY. Vol. 1302: 177-186.

Chikh-Ali, M. and **Karasev, A.V.** (2015) *Potato virus Y*. Chapter 7. In: Virus Diseases of Tropical and Subtropical Crops (P. Tennant and G. Fermin, eds), CABI International: Wallingford, Oxford, UK.

Martelli, G.P., A., Agranovsky, A.A., Bar-Joseph, M., Boscia, D., Candresse, T., Coutts, R.H.A., Dolja, V.V., Hu, J.S., Jelkmann, W., **Karasev, A.V.**, Martin, R.R., Minafra, Namba, S., and Vetten, H.-J. (2011). Family *Closteroviridae*. In: Virus Taxonomy. Ninth Report of the International Committee on Taxonomy of Viruses (King, A., Adams, M., Carstens, E., and Lefkowitz, E., editors). Elsevier: Oxford; pp. 987-1002.

Sanfaçon, H., Iwanami, T., **Karasev, A.V.**, van der Vlugt, R., Wellink, J., Wetzel, T. and Yoshikawa, N. (2011). Family *Secoviridae*. In: Virus Taxonomy. Ninth Report of the International Committee on Taxonomy of Viruses (King, A., Adams, M., Carstens, E., and Lefkowitz, E., editors). Elsevier: Oxford; pp. 849-867.

Karasev, A. V., Bar-Joseph, M. (2010). Citrus tristeza virus and taxonomy of closteroviruses. In: *Citrus Tristeza Virus Complex and Tristeza Diseases (A.V. Karasev and M.E. Hilf, eds)*; pp. 119-129. St. Paul, MN: American Phytopathological Society Press.

Karasev, A.V. (2010). Wheat yellows virus. In: *Compendium of wheat diseases*; pp. 117-118. St Paul, MN: American Phytopathological Society Press.

Karasev, A.V. and Martelli, G.P.(2004). Family Closteroviridae. In: *Virus Diseases of* Poaceae *(Graminae) (H. Lapierre and P. Signorret, eds.);* pp. 358-362. INRA Editions, Versailles, France.

Karasev, A.V., Gowda, S., Bar-Joseph, M., and Dawson, W.O. (2001). Closteroviruses. In: *Encyclopedia of Plant Pathology (O.C. Maloy and T.D. Murray, eds.);* pp. 228-230. John Wiley & Sons: New York, NY.

Martelli, G.P., Agranovsky, A.A., Bar-Joseph, M., Boscia, D., Candresse, T., Coutts, R.H.A., Dolja, V.V., Duffus, J.E., Falk, B.W., Gonsalves, D., Jelkmann, W., **Karasev, A.V.**, Minafra, A., Murant, A., Namba, S., Niblett, C.L., Vetten, H.J., and Yoshikawa, N. (2000). Family *Closteroviridae*. In: *Virus Taxonomy (M.H.V. Van Regenmortel, C.M. Fauquet, and D.H.L. Bishop, eds)*; pp. 943-952. Academic Press: San Diego, CA.

Martelli, G.P., Agranovsky, A.A., Bar-Joseph, M., Boscia, D., Candresse, T., Coutts, R.H.A., Dolja, V.V., Duffus, J.E., Falk, B.W., Gonsalves, D., Jelkmann, W., **Karasev, A.V.**, Minafra, A., Murant, A., Namba, S., Niblett, C.L., Vetten, H.J., and Yoshikawa, N. (2000). Genus *Capillovirus*. In: *Virus Taxonomy (M.H.V. Van Regenmortel, C.M. Fauquet, and D.H.L. Bishop, eds)*; pp. 952-956. Academic Press: San Diego, CA.

Martelli, G.P., Agranovsky, A.A., Bar-Joseph, M., Boscia, D., Candresse, T., Coutts, R.H.A., Dolja, V.V., Duffus, J.E., Falk, B.W., Gonsalves, D., Jelkmann, W., **Karasev, A.V.**, Minafra, A., Murant, A., Namba, S., Niblett, C.L., Vetten, H.J., and Yoshikawa, N. (2000). Genus *Trichovirus*. In: *Virus Taxonomy (M.H.V. Van Regenmortel, C.M. Fauquet, and D.H.L. Bishop, eds)*; pp. 956-960. Academic Press: San Diego, CA.

Martelli, G.P., Agranovsky, A.A., Bar-Joseph, M., Boscia, D., Candresse, T., Coutts, R.H.A., Dolja, V.V., Duffus, J.E., Falk, B.W., Gonsalves, D., Jelkmann, W., **Karasev, A.V.**, Minafra, A., Murant, A., Namba, S., Niblett, C.L., Vetten, H.J., and Yoshikawa, N. (2000). Genus *Vitivirus*. In: *Virus Taxonomy (M.H.V. Van Regenmortel, C.M. Fauquet, and D.H.L. Bishop, eds)*; pp. 960-964. Academic Press: San Diego, CA.

Karasev, A.V. (1998). Beet mosaic potyvirus. In: *CABI Global Crop Protection Compendium (CD-ROM).* CAB International: Wallingford, Oxford.

Karasev, A.V. (1998) Beet yellows closterovirus. In: *CABI Global Crop Protection Compendium (CD-ROM).* CAB International: Wallingford, Oxford.

Karasev, A.V., and Hilf, M.E. (1997). Molecular biology of the citrus tristeza virus. In: *Recent Development in Plant Pathology - Filamentous Viruses of Woody Plants (P. Monette, ed.)*; pp. 121-131. Research Signpost: Trivandrum, India.

Smith, H.G., and **Karasev, A.V.** (1996). Beet yellows closterovirus. In: *Viruses of Plants (A.A. Brunt, K. Crabtree, M.J. Dallwitz, A.J. Gibbs, and L. Watson, eds.)*; pp. 227-230. CAB International: Wallingford, Oxon, U.K.

Heathcote, G., Woods, R.D., Nienhaus, F., Fujisawa, I., Smith, H.G., and **Karasev, A.V.** (1996). Beet mosaic potyvirus. In: *Viruses of Plants (A.A. Brunt, K. Crabtree, M.J. Dallwitz, A.J. Gibbs, and L. Watson, eds.)*; pp. 210-214. CAB International: Wallingford, Oxon, U.K.

Waterworth, H., and **Karasev, A.V.** (1996). Bean mild mosaic carmovirus. In: *Viruses of Plants (A.A. Brunt, K. Crabtree, M.J. Dallwitz, A.J. Gibbs, and L. Watson, eds.)*; pp. 188-189. CAB International: Wallingford, Oxon, U.K.

Journal papers (peer-reviewed, 144 total):

(* - graduate student; ** - undergraduate student)

*Rodriguez-Rodriguez, M., Chikh-Ali, M., Feng, X., and **Karasev, A.V.** (2023). Genome sequences of six recombinant variants of potato virus Y identified in North American potato cultivars grown in China. *Microbiology Resource Announcements* **12**: published on-line December 28, 2023 (https://doi.org/10.1128/MRA.00512-23).

Rahman, M.M., Jarugula, S., Bagewadi, B., Fayad, A., **Karasev, A.V.**, and Naidu, R.A. (2023) Characterization of a new, country bean (*Lablab purpureus*) lineage of bean common mosaic necrosis virus. *Plant Disease* **107**: published on-line September 14, 2023 (https://doi.org/10.1094/PDIS-04-23-0822-RE).

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Chikh-Ali, M., Feng, X., and **Karasev, A.V.** (2017) Development and characterization of an infectious clone of *Bean common mosaic virus*. Abstracts of the 2017 Bi-annual Meeting of the Bean Improvement Cooperative, East Lansing, MI, October 29 – November 1, 2017; p. 14.

Karasev, A.V., Feng, X., and Myers, J.R. (2017) Resistance to *Bean common mosaic necrosis virus* conferred by the *bc-1* gene affects systemic spread of the virus. Abstracts of the Bi-annual Meeting of the Bean Improvement Cooperative, East Lansing, MI, October 29 – November 1, 2017; p. 48.

Feng, X., Guzman, P., Myers, J.R., and **Karasev, A.V.** (2017) Assessment of the resistance conferred by the *bc-1* alleles to *Bean common mosaic necrosis virus*. Annual Report of the Bean Improvement Cooperative, Vol. 59; pp. 45-46.

Feng, X., Myers, J.R., and **Karasev, A.V.** (2016) Biological and molecular characterization of *bean common mosaic virus* isolates from pathogenicity groups I and V. Annual Report of the Bean Improvement Cooperative, Vol. 59; pp. 99-100.

Feng, X., Myers, J.R., and **Karasev, A.V.** (2016) Molecular characterization of *Bean common mosaic virus* isolate overcoming the *bc-3* allele in common bean. Annual Report of the Bean Improvement Cooperative, Vol. 59; pp. 21-22.

Feng, X., Myers, J.R., and **Karasev, A.V.** (2015) An isolate of *Bean common mosaic virus* overcomes the *bc-3* allele in common bean. Annual Report of the Bean Improvement Cooperative, Vol. 58; pp. 49-50.

Wenninger, E.J., Olsen, N., Thornton, M., Nolte, P., Miller, J., and Karasev, A. (2013) Monitoring of potato psyllids, *Candidatus* Liberibacter solanacearum, and Zebra Chip in Idaho during the 2013 growing season. Proceedings of the 13th Annual SCRI Zebra Chip reporting Session. Nov. 3-6, 2013, San Antonio, TX; pp. 11-15.

*Feng, X., Poplawsky, A.R., Nikolaeva, O.V., Myers, J.R., and Karasev, A.V. (2014) Molecular and biological characterization of the RU1-OR strain of *Bean common mosaic virus*. Annual Report of the Bean Improvement Cooperative, Vol. 57; pp. 77-78.

Karasev, A.V., Bolotova, Y., Meacham, T., and Nikolaeva, O.V. (2008) PVY detection in potato leaves and tubers in Idaho: comparison of RT-PCR and ELISA in a realistic setting, and cost benefit analysis for the two methods. *In*: Proceedings of the Winter Commodity Schools (W.H. Bohl, P. Nolte, D. Morishita, J. Windes, and G. Shewmaker, eds.). University of Idaho Cooperative Extension System, Aberdeen, ID. pp. 119-127.

Other:

Popular press, interview articles, newspaper articles, newsletter articles:

Karasev, A., and Olsen, N. 2023. Potato virus initiative developing direct tuber testing alternatives. *Potato Grower Magazine*, April 2023; pp. 22-23.

Olsen, N. **Karasev, A.**, and Whitworth, J. 2022. Changing faces. How the industry can adjust to evolving PVY strains. *Potato Grower Magazine*, April 2022; pp. 30-31.

Olsen, N., Whitworth, J. and **Karasev, A.** 2022. New kids on the block. Success in PVY-resistant varieties. *Potato Grower Magazine*, May 2022; pp. 32-33.

Olsen, N. and **Karasev, A.** 2021. Going viral. Tackling the problem of evolving viruses. *Potato Grower Magazine*, May 2021; pp. 36-37.

Chikh-Ali, M., Tran, L.T., Price, W., and **Karasev, A.V.** 2020. Preliminary studies of age-related resistance to *Potato virus Y* in potato. *Potato Progress,* Vol. **XX** (4).

Duellman, K. and **Karasev, A.** (2019) Healthy start. Does cutting seed potatoes spread PVY from infected tubers to healthy ones? Potato Grower, May 2019, pp. 32-33.

Olsen, N. and **Karasev, A.** (2015) Going Viral. Discerning among common virus-induced diseases. *Potato Grower Magazine*, September 2015; p. 32.

Karasev, A.V. (2012) Potato virus research at Moscow campus. *Potato Grower Magazine*, February 2012; p. 36.

Karasev, A.V. (2012) Assisting with breeding for resistance to curly top. *The Sugarbeet, Spring 2012*; p. 8.

Olsen, N., Woodell, L., Miller, J., Wharton, P., **Karasev, A.**, Thornton, M., and Nolte, P. (2011) Taking the test: Diagnosing diseases in storage and in the field. *Potato Grower Magazine*, July 2011; pp. 26-28.

Karasev, A.V. and Nolte. P. (2011) Taking precautions: Keeping the industry clean of PVY. *Potato Grower Magazine*, January 2011; pp. 54-55.

Karasev, A.V. (2010) Sugarbeet Curly Top Assay. *The Sugarbeet, Spring 2010*, pp. 20-21.

Grants and Contracts Awarded; total since 2006: over $23 M, sole spending authority, over $13 M

Karasev, A.V. " Impact of grapevine leafroll-associated virus 3 genetic variants and emerging viruses on wine grape quality in the Pacific Northwest," Sponsored by Northwest Center for Small Fruit Research, Federal. $129,849 (spending authority) (October 1, 2023 - September 30, 2026).

Karasev, A.V., Dandurand, L.-M., Zasada, I. " Screening for viruses pathogenic to potato cyst nematode," Sponsored by USDA-ARS, Federal. $58,180 (spending authority) (September 1, 2022 - October 1, 2024).

Wenninger, E., Karasev, A.V., Moore, A. "Dissecting effects of insect-transmitted viruses on yield and quality of forage alfalfa crops," Sponsored by USDA-NIFA-AFRP, Federal. $299,965 ($96,696 - spending authority) (September 1, 2022 - August 31, 2025).

Wenninger, E., Karasev, A.V. "Do insect-transmitted viruses affect forage alfalfa yield and quality?," Sponsored by USAFRI-Alfalfa Checkoff, Federal. $58,304 ($30,264 - spending authority) (October 1, 2022 - September 30, 2024).

Karasev, A.V. "Enhancing quality and market potential of Idaho grapevines: development of new diagnostic tools," Sponsored by ISDA-SCBG, State. $95,944 (spending authority) (October 15, 2022 - September 30, 2024).

Karasev, A.V., Frost, K., Pavek, M. "Monitoring the PVY strains in Othello and Hermiston trials," Sponsored by Northwest Potato Research Consortium, State. $28,000 (spending authority) (July 1, 2022 - June 30, 2023).

Karasev, A.V. "Matching funding for the USDA-NIFA-SCRI project, two Ph.D. assistantships," Sponsored by the P3R1 Vice President for Research Initiative, University of Idaho internal. $144,370 (spending authority) (September 1, 2021 - January 8, 2024).

Karasev, A.V. "Development and adoption of direct tuber testing to enhance marketing potential of Idaho seed potato," Sponsored by ISDA-SCBG, State. $129,978 (spending authority) (October 15, 2021 - September 30, 2023).

Woodhall, J. and Karasev, A.V. "Reducing current season spread of PVY, and mitigating tuber quality loss in tuber-borne infections," Sponsored by ISDA-SCBG, State. $120,000 ($40,992 - spending authority) (October 15, 2021 - September 30, 2023).

Woolf-Weibye, A., Woodhall, J., and Karasev, A.V. "Advanced detection and surveillance methods to safeguard bean health in Idaho," Sponsored by Idaho Bean Commission and ISDA-SCBG, State. $132,466 ($67,320 - spending authority) (October 15, 2018 - September 30, 2020).

Wenninger, E.J., Karasev, A.V., and Olsen, N. "Developing the use of crop oils for management of current-season spread of *Potato virus Y* in Pacific Northwest potato," Sponsored by USDA-NIFA-CPPM, Federal. $199,770 ($84,996 - spending authority) (September 1, 2020 - August 31, 2023).

Karasev, A.V., Cooper, W.R. "Characterization of novel viruses pathogenic to potato psyllid," Sponsored by USDA-ARS, Federal. $98,838 (spending authority) (June 1, 2021 - May 31, 2024).

Karasev, A.V., et al. "Development of sustainable system-based management strategies for two vector-borne, tuber necrotic viruses in potato," Sponsored by USDA-NIFA-SCRI, Federal. $5,756,299 (spending authority) (September 1, 2020 - August 31, 2024).

Karasev, A.V. "Virome associated with common grape virus diseases in the Pacific Northwest and the development of new detection tools," Sponsored by Northwest Center for Small Fruit Research, Federal. $99,948 (spending authority) (October 1, 2020 - September 30, 2023).

Karasev, A.V., Dandurand, L.-M., Kuhl, J.C. "Protect US potato against exotic viroid," Sponsored by USDA-APHIS PPA 7721, Federal. $334,792 (spending authority) (August 1, 2020 - July 31, 2024).

Karasev, A.V. "Updating potato seed certification practices to effectively manage emerging virus disease issues," Sponsored by USDA-ARS, Federal. $58,140 (spending authority) (October 1, 2020 - September 30, 2022).

Karasev, A.V. "'Window of susceptibility' to PVY^{NTN} infection in potato and effect on virus translocation into tubers," Sponsored by Northwest Potato research Consortium, State. $135,000 (spending authority) (July 1, 2019 - June 30, 2022).

Karasev, A.V., Frost, K. "Monitoring the PVY strains in Othello and Hermiston trials," Sponsored by Northwest Potato research Consortium, State. $89,452 (spending authority) (July 1, 2016 - June 30, 2021).

Wenninger, E.J., Olsen, N., and Karasev, A.V. "Monitoring the distribution and abundance of potato psyllids and liberibacter in Idaho," Sponsored by Idaho Potato Commission, State. $110,000 ($15,000 - spending authority) (July 1, 2019 - June 30, 2022).

Karasev, A.V., "Development of detection tools for the new strain of *Bean common mosaic virus*," Sponsored by Idaho Bean Commission, State. $24,000 (July 1, 2018 - June 30, 2022).

Karasev, A.V. "Ensuring safety and high quality of the Idaho potato tissue culture lines," Sponsored by Northwest Potato research Consortium, State. $12,500 (spending authority) (July 1, 2019 - June 30, 2020).

Karasev, A.V., Duellman, K. "Monitoring the PVY strain composition in seed potato in the PNW," Sponsored by Northwest Potato research Consortium, State. $77,868 (spending authority) (July 1, 2016 - June 30, 2020).

Karasev, A.V., Kuhl, J.C., Sathuvali, V. "New sources of PVY resistance," Sponsored by Northwest Potato research Consortium, State. $64,000 (spending authority) (July 1, 2016 - June 30, 2020).

Snyder, W., et al. "Mapping and predicting psyllid sources, immigration and locality-specific disease spread in the PNW," Sponsored by USDA-NIFA-SCRI, Federal. $2,400,000 ($173,393 – spending authority) (September 15, 2015 - June 30, 2020).

Karasev, A.V., "Developing beet curly top virus infectious clones to screen sugar beet plants for resistance," Sponsored by USDA-ARS, Federal. $105,000 (May 1, 2019 - April 30, 2022).

Karasev, A.V., "Addressing prevalence of beet curly top virus in beet leafhopper and potato, and screening potato cultivars for susceptibility to BCTV," Sponsored by USDA-ARS, Federal. $55,000 (April 1, 2019 - June 30, 2020).

Charkowski, A., Gudmestad, N., McIntosh, C., and Karasev, A. V. "Safeguarding the US seed potato industry against emerging seed potato-borne pathogens that impact trade and farm viability," Sponsored by Colorado State University-APHIS Farm Bill, Federal. $906,609 ($32,415 – spending authority) (September 15, 2019 - September 14, 2020).

Karasev, A.V., Olsen, N., Wenninger, E. "Reducing current season spread of PVY, and mitigating tuber quality loss in tuber-borne infections," Sponsored by ISDA-SCBG, State. $113,914 ($60,658 - spending authority) (October 15, 2018 - September 30, 2020).

Karasev, A.V., Pasche, J., McGee, R. "Evaluating the web of *Pea seed-borne mosaic virus* pathotypes and host resistance alleles," Sponsored by ISDA-SCBG, State. $149,464 ($51,210 - spending authority) (October 15, 2018 - September 30, 2020).

Karasev, A.V., Myers, J.R. "Increasing diversity and choice in the yellow dry bean (Peruano) trade," Sponsored by ISDA-SCBG, State. $133,822 ($69,857 - spending authority) (October 15, 2017 – June 30, 2020).

Karasev, A.V. "BFP17 CGIAR Peru (Flores): Genetic diversity of *Potato virus Y* (PVY) and evolution of PVY in the center of origin of potato," Sponsored by USDA-FAS, Federal. $49,552 ($49,552 - spending authority) (September 1, 2017 - September 30, 2019).

Karasev, A.V. “A proposal to study the set of PVY isolates circulating in potato in China”, Sponsored by J.R. Simplot, industry. $19,136 (March 2019 – December 31, 2019).

Karasev, A.V., Olsen, N., "Mitigation of effects of the tuber necrotic strains of *Potato virus Y* on Idaho potato," Sponsored by ISDA-SCBG, State. $8,753 (January 1, 2019 - July 31, 2019).

Karasev, A.V., "Assessing the risks of introduction of potato viruses from abroad and strengthening the capabilities of the U.S. potato quarantine program," Sponsored by USDA-ARS, Federal. $75,000 (July 1, 2017 - September 30, 2019).

Gray, S.M., Charkowski, A., Gudmestad, N., McIntosh, C., and Karasev, A. V. “Safeguarding the US seed potato industry against emerging seed potato-borne pathogens that impact trade and farm viability," Sponsored by USDA-ARS-APHIS Farm Bill, Federal. $906,609 ($54,415 – spending authority) (September 15, 2018 - September 14, 2019).

Karasev, A.V., Olsen, N., "Mitigation of effects of the tuber necrotic strains of *Potato virus Y* on Idaho potato," Sponsored by ISDA-SCBG, State. $149,420 ($99,420 - spending authority) (October 15, 2016 - July 31, 2019).

Wenninger, E.J., Rondon, S., Wohleb, C.H., Karasev, A.V., " Zebra chip (ZC) and potato exports: pest delimitation and vector/pathogen monitoring impacting trade to the Pacific Rim," Sponsored by USPB/USDA-TASC, Federal. $167,000 ($76,000 - spending authority) (July 1, 2016 - December 31, 2018).

Karasev, A.V., "Potato Psyllid Ecology, Transmission Biology of Liberibacter, and Management of Zebra Chip Disease," Sponsored by USDA-ARS, Federal. $100,000 (May 1, 2016 - December 31, 2019).

Karasev, A.V., "Novel Genetic Systems to Develop Bean Varieties Resistant to Viruses for Export to Mexico," Sponsored by ISDA-SCBG, State. $98,964 ($98,964 - spending authority) (October 15, 2015 - October 14, 2017).

De Jong, W., Gray, S.M., Charkowski, A., Karasev, A. V., et al. " Biological and economic impacts of emerging potato tuber necrotic viruses and the development of comprehensive and sustainable management practices," Sponsored by USDA-NIFA-SCRI, Federal. $8,400,000 ($830,591 – spending authority) (September 15, 2014 - September 14, 2019).

Karasev, A.V., Kuhl, J.C., "Identification of potato genes conferring resistance to NTN and N-Wilga recombinants of *Potato virus Y*," Sponsored by ISDA-SCBG, State. $149,420 ($99,420 - spending authority) (October 15, 2014 - October 14, 2016).

Karasev, A.V., "Monitoring Potato Psyllid Populations and Liberibacter in the Pacific Northwest," Sponsored by USDA-ARS, Federal. $289,527 (July 1, 2014 - June 30, 2019).

Karasev, A.V., Nolte, P., Kuhl, J.C., et al. "Management of potato viruses in the Pacific Northwest," Sponsored by Northwest Potato research Consortium, State. $92,217 (spending authority) (July 1, 2014 - June 30, 2016).

Karasev, A.V., Lee, J., "Impact of grapevine viruses on Idaho grape quality," Sponsored by ISDA-SCBG, State. $93,960 (October 15, 2013 - October 14, 2015).

Karasev, A.V., Nolte, P., "Eradication of the necrotic isolates of PVY from Idaho potato," Sponsored by ISDA-SCBG, State. $155,442 (October 15, 2013 - October 14, 2015).

Karasev, A.V., Olsen, N., Thornton, M., Wenninger, E. "Monitoring potato psyllid biotypes as well as off-season and overwintering distribution and abundance of potato psyllids and *Candidatus* Liberibacter solanacearum in Idaho," Sponsored by ISDA-SCBG, State. $157,363 ($91,620 - spending authority) (October 15, 2013 - October 14, 2015).

Menasco, L., Karasev, A.V., Meyers, J., "Trials of Peruano Dry Bean Seed in the US and Mexico," Sponsored by ISDA-SCBG, State. $122,000 ($49,185 - spending authority) (October 15, 2013 - October 14, 2015).

Karasev, A.V., "Rapid and reliable diagnostics to identify the tuber necrotic isolates of *Potato virus Y*," Sponsored by USDA-ARS, Federal. $72,975 (September 1, 2013 - August 31, 2014).

Karasev, A.V., "Development of psyllid typing tools in Idaho, and application for typing psyllids carrying *Candidatus* Liberibacter solanacearum," Sponsored by USDA-ARS, Federal. $35,460 (August 1, 2013 - July 31, 2015).

Karasev, A.V., "Identification of genetic determinants of tuber necrosis and virulence in recombinant PVY (PVY^{NTN})," Sponsored by Idaho Potato Commission, State. $26,120 (July 1, 2013 - June 30, 2014).

Karasev, A.V., "Identification of genetic determinants of tuber necrosis and virulence in recombinant PVY (PVY^{NTN})," Sponsored by Washington State Potato Commission, State. $26,120 (July 1, 2013 - June 30, 2014).

Karasev, A.V., "Molecular toolbox to protect common beans against viruses," Sponsored by Idaho Bean Commission, State. $12,000 (July 1, 2013 - June 30, 2014).

Karasev, A.V., "Management of bean viruses in Idaho through selection of resistant varieties," Sponsored by Idaho Bean Commission, State. $16,000 (July 1, 2012 - June 30, 2014).

Karasev, A.V., "Molecular toolbox to screen sugar beet germplasm against curly top viruses," Sponsored by Idaho Sugar Beet Council, State. $170,000 (April 1, 2013 - March 31, 2018).

Karasev, A.V., Martin, R.R. "Production of antibodies to detect four viruses from the grapevine leafroll complex by ELISA," Sponsored by USDA-NIFA-NWCSFR, Federal. $105,000 (October 1, 2012 - September 30, 2015).

Karasev, A.V., Brown, C. “Sequencing *Potato virus Y* genomes – Technology Access Grant,” Sponsored by IBEST, University of Idaho. $6,300 (October 1, 2012 – September 30, 2013).

Karasev, A.V., "Rapid and reliable diagnostics to identify the tuber necrotic isolates of *Potato virus Y*," Sponsored by National Potato Council, Non-government. $90,000 (October 1, 2012 - September 30, 2013).

Wenninger, E., Olsen, N., Karasev, A.V., Thornton, M., Nolte, P. "Monitoring potato psyllids and zebra chip in Idaho and examining effects of disease on tubers during storage," Sponsored by ISDA-SCBG, State. $108,862 000 ($20,000 - spending authority) (October 1, 2012 - July 31, 2014).

Benedict, C., Hamm, P., Karasev, A.V., "Quantify *Potato Virus Y* (PVY) in Western Washington Seed Potatoes," Sponsored by Washington State Potato Commission, State. $32,883 ($8,400 - spending authority) (July 1, 2012 - June 30, 2014).

Karasev, A.V., "Development and evaluation of improved diagnostic procedures for diverse strains of Potato virus Y," Sponsored by USDA-ARS, Federal. $40,294 (July 1, 2012 - June 30, 2014).

Wenninger, E., Olsen, N., Karasev, A.V., Thornton, M., Nolte, P. "Monitoring potato psyllids and zebra chip in Idaho and examining effects of disease on tubers during storage," Sponsored by Idaho Potato Commission, State. $123,998 ($22,560 - spending authority) (July 1, 2012 - June 30, 2014).

Gray, S.M., Thannhauser, N., Karasev, A.V. "The orchestrated role of three multifunctional luteovirus proteins in virus movement with plant hosts and aphid vectors," Sponsored by USDA-NIFA-AFRI, Federal. $500,000 ($150,000 - spending authority) (March 15, 2012 - March 14, 2014).

Caldwell, D., Karasev, A.V., Meyers, J., "Development of virus-resistant yellow bean seed for domestic sale and export to Mexico," Sponsored by ISDA-SCBG, State. $122,000 ($64,920 - spending authority) (October 15, 2011 - October 14, 2013).

Karasev, A.V., Nolte, P., "Eradication of necrotic strains of *Potato virus Y* in Idaho." Sponsored by ISDA-SCBG, State. $151,382 (October 15, 2011 - October 14, 2013).

Karasev, A.V., "Surveillance for *Potato virus Y* strains in Washington and Oregon import trials," Sponsored by Idaho Potato Commission, State. $22,500 (July 1, 2011 - June 30, 2014).

Karasev, A.V., "Surveillance for *Potato virus Y* strains in Washington and Oregon import trials," Sponsored by Washington State Potato Commission, State. $16,500 (July 1, 2011 - June 30, 2014).

Karasev, A. V., Dolja, V.V., "Cross-talk between aphid transmission, long-distance transport, and virion assembly in a closterovirus," Sponsored by USDA-NIFA-AFRI, Federal. $399,000 (January 1, 2010 - December 31, 2012).

Gray, S.M., Karasev, A. V., Nolte, P., Alvarez, J.M., Hutchinson, P., MacIntosh, C., Whitworth, J., Charkowski, A., Groves, R., "Development of comprehensive strategies to manage *Potato virus Y* in potato and eradicate the tuber necrotic variants recently introduced into the United States," Sponsored by USDA-CSREES-SCRI, Federal. $2,381,759 ($323,139 – spending authority) (September 15, 2009 - September 14, 2014).

Karasev, A.V., Nolte, P., "*Potato virus Y* control in Idaho: incidence and distribution of *Potato virus Y* strains in Idaho seed potato," Sponsored by ISDA-SCBG, State. $75,000 (September 15, 2009 - September 14, 2011).

Caldwell, D., Karasev, A.V., Meyers, J., "Development of virus-resistant yellow bean seed for domestic sale and export to Mexico," Sponsored by ISDA-SCBG, State. $122,000 ($64,920 - spending authority) (September 15, 2009 - September 14, 2011).

Karasev, A.V., Brown, C., Gray, S.M., "Complete sequence and diversity of the PVY complex," Sponsored by USDA-CSREES-NRI, Federal. $465,000 (December 15, 2008 - December 14, 2012).

Eigenbrode, S., Bechinski, E., Karasev, A.V., Pappu, H., McPhee, K. "Reducing Risks Associated with Viruses Affecting Legumes in the Inland Pacific Northwest," Sponsored by USDA-CSREES-RAMP, Federal. $1,250,000 ($203,226 – spending authority) (August 15, 2008 – August 14, 2012).

Karasev, A.V., Eigenbrode, S., "Induction of Volatile Compounds from Virus-Infected Plants," Sponsored by USDA-CSREES-NRI, Federal. $143,967 (December 1, 2007 - August 31, 2010).

Eigenbrode, S., Bosque-Perez, N., Karasev, A.V., "Vector responses to virus-induced changes in the host plant: implications for virus spread," Sponsored by USDA-NIFA-AFRI, Federal. $349,950 ($35,778 – spending authority) (September 1, 2009 - June 30, 2012).

Karasev, A.V., "Understanding why some isolates of *Potato virus Y* are necrotic in potato and tobacco," Sponsored by USDA-ARS, Federal. $167,525 (September 1, 2008 - June 30, 2010).

Karasev, A.V., "Development and evaluation of improved diagnostic procedures for diverse strains of Potato virus Y," Sponsored by USDA-ARS, Federal. $180,762 (September 1, 2007 - July 31, 2012).

Karasev, A.V., "Biological and genome analysis of Potato virus Y isolates affecting the U.S. potato crop," Sponsored by USDA-ARS, Federal. $144,000 (October 1, 2006 - August 31, 2009).

Karasev, A.V., "Preliminary survey of potato and pepper isolates of PVY circulating in North-Central Mexico," Sponsored by U.S. Potato Board, Private. $56,229 (January 1, 2009 - September 30, 2011).

Karasev, A.V., Rayapati, N., Simko, B. "Survey of grapevine viruses and virus vectors in Idaho," Sponsored by USDA-CSREES-NWCSFR, Federal. $105,000 (October 1, 2010 - September 30, 2013).

Karasev, A.V., "Documentation of grapevine viruses for the sustainability of wine grape industry in Idaho," Sponsored by Idaho Grape Growers and Wine Producers Commission, State. $7,500 (July 1, 2009 - June 30, 2012).

Karasev, A.V., "Genetic diversity, diagnosis, and management of curly top virus in snap beans in Idaho," Sponsored by Idaho Bean Commission, State. $30,000 (July 1, 2007 - June 30, 2012).

Karasev, A.V., Strausbaugh, C. "Diagnosis, and management of curly top virus in sugar beet in Idaho," Sponsored by Idaho Sugar Beet Council, State. $55,300 (April 1, 2009 - March 31, 2014).

Karasev, A.V., Nolte, P., Olsen, N., Boze, D., "Survey of PVY strain types in Idaho potato," Sponsored by Idaho Potato Commission, State. $214,656 (July 1, 2010 - June 30, 2014).

Karasev, A.V., Nolte, P., Bolotova, Y.V., McIntosh, C.S., Whitworth, J., Boze, D., "Development, economic analysis, and validation of laboratory assays to identify potato viruses in dormant tubers," Sponsored by Idaho Potato Commission, State. $151,990 (July 1, 2007 - June 30, 2011).

Karasev, A.V., Ewing, L., "Production of virus-free potato lines in Idaho," Sponsored by Idaho Potato Commission, State. $95,710 (July 1, 2008 - June 30, 2014).

Gupta, S., Karasev, A.V., Olsen, N., "Evaluation of currently grown potatoes for storability and nutritional properties," Sponsored by Idaho Potato Commission, State. $73,800 ($6,000 – spending authority) (July 1, 2009 - June 30, 2011).

Karasev, A.V., Olsen, N., Nolte, P., Wharton, P., Thornton, M., "Utilizing pathogen detection test kits for rapid in-field use," Sponsored by Idaho Potato Commission, State. $21,150 ($3,500 – spending authority) (July 1, 2010 - June 30, 2011).

Nolte, P., Karasev, A.V., Boze, D., "Investigation of techniques to determine virus content of potato seed lots," Sponsored by Idaho Potato Commission, State. $23,600 ($11,500 – spending authority) (July 1, 2008 - June 30, 2010).

Karasev, A.V., Bosque-Perez, N., "Research on virus diseases of small grain crops in Idaho," Sponsored by Idaho Wheat Commission, State. $19,712 (July 1, 2008 - June 30, 2010).

Zemetra, R., Karasev, A.V., Bosque-Perez, N., "Developing BYDV resistance using siRNA gene silencing," Sponsored by Idaho Wheat Commission, State. $79,883 ($61,706 – spending authority) (July 1, 2008 - June 30, 2010).

Eigenbrode, S., Karasev, A.V., "Monitoring and Forecasting Disease-Causing Viruses in Cool Season Food Legumes," Sponsored by USDA-CSREES-CSFL, Federal. $86,510 ($31,458 – spending authority) (July 1, 2007 - July 31, 2010).

Karasev, A.V., Windes, J.M., Guy, S., Brown, B.D., Morishita, D.W., "UI Small Grains Coordinated Research Project," Sponsored by USDA-BRD/CSREES, Federal. $160,000 ($20,500 – spending authority) (August 1, 2007 - September 30, 2008).

Karasev, A.V., "Diversity of Viruses in the Native Pacific Northwest Flora," Sponsored by NSF-EPSCoR, State. $4,500 (May 14, 2007 - July 31, 2007).

Karasev, A.V., Nolte, P., Whitworth, J., "Development of a molecular assay to identify major potato viruses," Sponsored by Idaho Potato Commission, State. $10,000 (July 1, 2006 - June 30, 2007).

Karasev, A.V., "Plant virus nanoparticles as a platform to present peptides," Sponsored by University Research Council, University of Idaho. $10,000 (July 1, 2006 - June 30, 2007).

Karasev, A.V., "Plant Virus Nanoparticles – an Innovative Platform for Delivery of Anti-Toxins and Anti-Toxin Vaccines," Sponsored by Ben Franklin Partners Nanotechnology Institute, Private. $30,000 (October 1, 2005 - December 31, 2005).

Karasev, A.V., "Immune Response to Oral HIV-1 Tat Expressed in Plants," Sponsored by NIH-NIAID, Federal. $399,625 (September 15, 2002 - August 31, 2005).

SERVICE:

Major Committee Assignments:

Regional:

Northwest Foundation Block Advisory Group, member, 2017-present
WERA-20 Diseases of grapevine, fruit trees, and small fruits, member, 2009-present. Organizer of the 2010 meeting in Boise, ID.
WERA-89 Diseases of potato, member, 2007-present, 2011 – secretary, 2012 – vice-chair, 2013 – chair. Organizer of the 2014 meeting in San Diego, CA.

State:

Idaho Zebra Chip Management Advisory Committee, (November 2012 – Present).
Foundation Seed Stocks Committee, Member. (November 2007 - Present).

University and College of Agricultural and Life Sciences:

Promotion and Tenure Committee, University (2022-present)
Promotion and Tenure Committee, CALS (2020-2022)
Search Committee for a University Research Office, Assistant Sponsored Program Administrator, Member, hired K. Henderson
Search Committee for the Dean of the College of Graduate Studies, Member. (December 2016 – March 2017); hired J. McMurtry.
Search Committee for Director of the Nuclear Potato Program, Member. (October 2015 – February 2016); hired J. Rowley (Durrin).
Greenhouse Manager Search Committee (CALS), member 2012; hired Phil Anderson
Greenhouse Assistant Manager Search Committee (CALS), member 2012; hired Phil Anderson
University Biohazards Committee, Member. (June 2007 – June 2010).
College of Agricultural and Life Sciences, P&T Committee, Member. (May 2009 – October 2009).

Departmental:

Search Committee for Entomologist in Parma, Member, 2022-2023, hired A. Falcon
Mentoring committee for a new PS faculty, Dr. G. Teixeira, Member, 2022-present
Promotion Committee for Louise-Marie Dandurand, Chair, 2022
Promotion Committee for James Woodhall, Member, 2022
Search Committee for Potato Storage Physiologist, Member; hired G. Teixeira.
Search Committee for Plant Pathologist, Member; hired L.-M. Dandurand.
Third Year Faculty Review Committee for Kasia Duellman, Chair, 2019
Third Year Faculty Review Committee for James Woodhall, Member, 2019
Search Committee for Molecular Systematicist-Entomologist, Member; hired Dr. M. Borowiec and C. Hamilton.
Promotion Committee for Louise-Marie Dandurand, Chair, 2017
Mentoring committee for new EPPN faculty, Dr. K. Duellman, Member (since March 2016), Chair (since September, 2017).
Search Committee for Parma Plant Pathologist, Member. (April 2015 – October 2015); hired Dr. J. Woodhall.
Search Committee for Wheat Molecular Biologist, Chair. (July 2014 – June 2015); search failed.
Promotion and Tenure Committee Fangming Xiao, Member, 2013
Third Year Faculty Review Committee for Joseph Kuhl, Member, 2012
Third Year Faculty Review Committee for Phillip Wharton, Member, 2011
Third Year Faculty Review Committee for Fangming Xiao, Chair, 2011
Mentoring committee for new PSES faculty, Dr. J. Kuhl, Member, appointed February 2010
Search Committee for Plant Pathologist, Chair. (May-November, 2008); search frozen and then canceled due to budget crisis.
Search Committee for Molecular Biologist, Member. (July 2007 – October 2008); hired Dr. J. Kuhl.
Promotion and Tenure Committee for Mark Schwartzlaender, Member, 2006

Judging:

Judge, College of Science Student Research EXPO Competition (October 28, 2011).
Judge, UI Graduate Student Research Competition (May 25, 2008).

Professional and Scholarly Organizations:

Gamma Sigma Delta, the Honor Society of Agriculture, Idaho Branch, member (2006-present)
    Vice-President (2011)
    President (2012)
International Committe on Taxonomy of Viruses. Member (1993 - present)
    Study Group on *Closteroviridae* (1993-2012)
    Study Group on *Secoviridae* (2002-present)
        Chair (2017-present)
American Society for Virology, member (1992 - present).
American Phytopathological Society, member (1992 - present).
    Vice-Chair, Virology Committee (2004-2005)
    Chair, Virology Committee (2005-2006)
    Immediate Past Chair, Virology Committee (2006-2007)
Potato Association of America. (2006 - present).

Editorial and Review Activities:

Editor, "PhytoFrontiers," American Phytopathological Society. (July 1, 2020 - present).
Editor-in-Chief, “Plant Disease,” American Phytopathological Society. (January 1, 2019 - December 31, 2021).

Senior Editor, "Plant Disease," American Phytopathological Society. (January 1, 2013 - December 31, 2018).
Editor (Virology), *BSPP – New Disease Reports* (British Society for Plant Pathology) – Editorial Board Member (January 1, 2011 – present).
Senior Editor, "Phytopathology," American Phytopathological Society. (January 1, 2009 - April 30, 2012).
Associate Editor, "Phytopathology," American Phytopathological Society. (January 1, 2006 - December 31, 2008).
Reviewer for *PNAS, Journal of Virology, Virology*, *Virus Research, Virus Genes, Journal of Virological Methods, Archives of Virology, Plant Physiology, Molecular Plant-Microbe Interactions, Phytopathology, Plant Disease, European Journal of Plant Pathology, Molecular Plant Pathology, HortScience, Journal of Phytopathology, American Journal of Potato Research, Plant Cell, Tissue & Organ Culture, FASEB Journal*

National service:

Panelist, Department of Defense, U.S. Army Medical Research and Materiel Command, Congressionally Directed Medical Research Programs (CDMRP), August 2020
Panelist, Genome Canada Panel, February 2020
Panelist, National Institute of Food and Agriculture, Crop Protection and Pest Management Program Panel, August 2019
Panelist, National Institute of Food and Agriculture, Crop Protection and Pest Management Program, and Methyl Bromide Transition Program Panel, July 2017
Panelist, USDA-ARS Office of Scientific Quality Review Panel, January, 2017
Panelist, National Science Foundation – National Institute of Food and Agriculture, Plant Biotic Interactions Panel 1, August 2016
Panelist, USDA-CSREES, Northwest Center for Small Fruit Research Review Panel, November, 2009
Panelist, USDA-ARS Office of Scientific Quality Review Panel, December, 2006
Reviewer for Bill and Melinda Gates Foundation Grand Challenge Program, 2014, 2015
Reviewer for National Science Foundation, Plant Genome and Microbial Genome Sequencing Programs, 2006, 2007, 2009, 2011
Reviewer for USDA-AFRI, Plant Biosecurity Program, 2009
Reviewer for US-Israel BARD Program, 2008, 2009, 2011, 2012, 2014, 2015, 2020
Reviewer for the California Citrus Research Board, 2014-2020
Reviewer for the Consortium for Plant Biotechnology Research Programs, 2007, 2008, 2011
Reviewer for California Department of Food & Agriculture, Pierce's Disease Control Program, 2007
Reviewer for Agriculture and Agri-Food Canada (AAFC), Science and technology Branch, Hypothesis Driven Research Projects, 2013 and 2018

Other Extramural Service Activities

2019-2021	Member, Publication Board, American Phytopathological Society
2019-2021	Editor-in-Chief – Plant Disease, An International Journal. American Phytopathological Society, St. Paul, MN (3-year term).
2017-2019	Member, Nominations Committee, American Phytopathological Society
2017	Acting Editor-in-Chief – Plant Disease, An International Journal. American Phytopathological Society, St. Paul, MN (April 2017).
2013-2018	Senior editor – Plant Disease, An International Journal. American Phytopathological Society, St. Paul, MN (two 3-year terms).

2011-present	Editor (Virology) – BSPP – New Disease Reports. British Society for Plant Pathology.
2010-present	Reader, Washington Commercial Potato Seed Lot Trials, Othello, WA, 250-350 seed lots every year
2010	Guest editor – Citrus Tristeza Virus and Tristeza Diseases. American Society for Phytopathology Press, St. Paul, MN (15 chapters).
2009-2011	Senior editor – Phytopathology, An International Journal. American Society for Phytopathology Press, St. Paul, MN (3-year term).
2009	Guest editor - Immunological Potential of Plant-Based Microbial Vaccines. In: *Current Topics in Microbiology and Immunology, Vol. 332*; Springer-Verlag, Heidelberg/New York (6 chapters).
2006-2008	Associate editor – Phytopathology, An International Journal. American Society for Phytopathology Press, St. Paul, MN (3-year term).
2004	Guest editor – *Vaccine,* Vol. **23** (issue 15) (Symposium - Plant Derived Vaccines and Antibodies: Potential and Limitations)

Honors and Awards

2022 University of Idaho Distinguished Professor

2019 Fellow, American Phytopathological Society

2013 University of Idaho President's Mid-Career Faculty Award

2012 University of Idaho Merit Award

2011 *American Journal of Potato Research*, Outstanding Paper of the Year Award – granted by the Potato Association of America. – Karasev et al. (2010).

2008 Award for Excellence – Member of the Technical Committee for WERA-089 "Potato Virus Disease Control", in recognition of outstanding contributions to Western Region Multistate Research. Received March 11, 2009.

2006 U of I, University Research Office, Travel Award

2003 Delaware Valley College, Doylestown, PA, Student Recognition Award

1998 Japan Science and Technology Agency, Office of the Prime Minister, a short-term (4 weeks) fellowship

1993 and 1997 Travel awards of the National Center for Biotechnology Information, Scientific Visitors Program, National Library of Medicine, National Institutes of Health