

## Curriculum vitae: Nadezhda Spechenkova



### Address

Shemyakin–Ovchinnikov Institute of bioorganic chemistry RAS, Moscow, Russia

### Contacts

<https://www.ibch.ru/en/users/1391>

## Education

2017– 2021	Russia, Moscow	M.M. Shemyakin–Yu.A. Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences	Postgraduate degree
2011– 2017	Russia, Moscow	Russian State Agrarian University - Moscow Timiryazev Agricultural Academy	Master's degree

## Work experience

2015– 2016	Russia, Moscow	Koltzov Institute of Developmental Biology of Russian Academy of Sciences	junior researcher
---------------	-------------------	---	-------------------

## IBCh positions

2023–to date	Research fellow
2020–to date	Junior research fellow
2020–2023	Junior research fellow

## Scientific interests

Plant science

## Scientific societies' membership

The National Committee of Biochemists and Molecular Biologists

## Titles

2022	Doctor of Philosophy (Chemistry)
------	----------------------------------

## Publications

1. Samarskaya VO, Butyrin FA, Suprunova TP, **Spechenkova NA**, Taliatsky ME, Kalinina NO (2026). The Distribution and Genetic Variability of Potato Viruses in Russian Regions. *Acta Naturae* 18 (1), 91–103, [10.32607/actanaturae.27830](https://doi.org/10.32607/actanaturae.27830)
2. Kalinina NO, **Spechenkova NA**, Taliatsky ME (2025). Erratum to: Biotechnological Approaches to Plant Antiviral Resistance: CRISPR-Cas or RNA Interference? *Biochemistry (Mosc)* 90 (10), 1450, [10.1134/S0006297925100013](https://doi.org/10.1134/S0006297925100013)
3. Samarskaya V, **Spechenkova N**, Kalinina NO, Love AJ, Taliatsky M (2025). The Emerging Role of Omics-Based Approaches in Plant Virology. *Viruses* 17 (7), 986, [10.3390/v17070986](https://doi.org/10.3390/v17070986)
4. Kalinina NO, **Spechenkova NA**, Taliatsky ME (2025). Biotechnological Approaches to Plant Antiviral Resistance: CRISPR-Cas or RNA Interference? *Biochemistry (Mosc)* 90 (6), 804–817,

[10.1134/S0006297925600139](https://doi.org/10.1134/S0006297925600139)

5. Samarskaya VO, Koblova S, Suprunova T, Rogozhin EA, **Spechenkova N**, Yakunina S, Love AJ, Kalinina NO, Taliatsky M (2025). Poly ADP-Ribosylation in a Plant Pathogenic Oomycete *Phytophthora infestans*: A Key Controller of Growth and Host Plant Colonisation. *J Fungi (Basel)* 11 (1), 29, [10.3390/jof11010029](https://doi.org/10.3390/jof11010029)
6. Samarskaya V, Kuznetsova M, Gryzunov N, **Spechenkova N**, Bagdasarova P, Ryabov E, Taliatsky M, Kalinina NO (2024). Identification of Two Novel Recombinant Types of Potato Virus Y from *Solanum tuberosum* Plants in Southern Region of Russia. *PLANT DIS* 109 (5), 998–1003, [10.1094/PDIS-10-24-2151-SC](https://doi.org/10.1094/PDIS-10-24-2151-SC)
7. Gryzunov N, Morozov SY, Suprunova T, Samarskaya V, **Spechenkova N**, Yakunina S, Kalinina NO, Taliatsky M (2024). Genomes of Alphanucleorhabdovirus *Physostegiae* Isolates from Two Different Cultivar Groups of *Solanum melongena*. *Viruses* 16 (10), 1538, [10.3390/v16101538](https://doi.org/10.3390/v16101538)
8. Kalinina NO, **Spechenkova N**, Ilina I, Samarskaya VO, Bagdasarova P, Zavriev SK, Love AJ, Taliatsky M (2024). Disruption of Poly(ADP-ribosyl)ation Improves Plant Tolerance to Methyl Viologen-Mediated Oxidative Stress via Induction of ROS Scavenging Enzymes. *Int J Mol Sci* 25 (17), 9367, [10.3390/ijms25179367](https://doi.org/10.3390/ijms25179367)
9. Samarskaya VO, **Spechenkova N**, Ilina I, Suprunova TP, Kalinina NO, Love AJ, Taliatsky ME (2023). A Non-Canonical Pathway Induced by Externally Applied Virus-Specific dsRNA in Potato Plants. *Int J Mol Sci* 24 (21), 15769, [10.3390/ijms242115769](https://doi.org/10.3390/ijms242115769)
10. Samarskaya VO, Ryabov EV, Gryzunov N, **Spechenkova N**, Kuznetsova M, Ilina I, Suprunova T, Taliatsky ME, Ivanov PA, Kalinina NO (2023). The Temporal and Geographical Dynamics of Potato Virus Y Diversity in Russia. *Int J Mol Sci* 24 (19), 14833, [10.3390/ijms241914833](https://doi.org/10.3390/ijms241914833)
11. **Spechenkova N**, Samarskaya VO, Kalinina NO, Zavriev SK, MacFarlane S, Love AJ, Taliatsky M (2023). Plant Poly(ADP-Ribose) Polymerase 1 Is a Potential Mediator of Cross-Talk between the Cajal Body Protein Coilin and Salicylic Acid-Mediated Antiviral Defence. *Viruses* 15 (6), , [10.3390/v15061282](https://doi.org/10.3390/v15061282)
12. **Spechenkova NA**, Kalinina NO, Zavriev SK, Love AJ, Taliatsky ME (2023). ADP-Ribosylation and Antiviral Resistance in Plants. *Viruses* 15 (1), 241, [10.3390/v15010241](https://doi.org/10.3390/v15010241)
13. Samarskaya VO, **Spechenkova N**, Markin N, Suprunova TP, Zavriev SK, Love AJ, Kalinina NO, Taliatsky M (2022). Impact of Exogenous Application of Potato Virus Y-Specific dsRNA on RNA Interference, Pattern-Triggered Immunity and Poly(ADP-ribose) Metabolism. *Int J Mol Sci* 23 (14), , [10.3390/ijms23147915](https://doi.org/10.3390/ijms23147915)
14. Glushkevich A, **Spechenkova N**, Fesenko I, Knyazev A, Samarskaya V, Kalinina NO, Taliatsky M, Love AJ (2022). Transcriptomic Reprogramming, Alternative Splicing and RNA Methylation in Potato (*Solanum tuberosum* L.) Plants in Response to Potato Virus Y Infection. *Plants (Basel)* 11 (5), , [10.3390/plants11050635](https://doi.org/10.3390/plants11050635)
15. **Spechenkova N**, Fesenko IA, Mamaeva A, Suprunova TP, Kalinina NO, Love AJ, Taliatsky M (2021). The Resistance Responses of Potato Plants to Potato Virus Y Are Associated with an Increased Cellular Methionine Content and an Altered SAM:SAH Methylation Index. *Viruses* 13 (6), , [10.3390/v13060955](https://doi.org/10.3390/v13060955)
16. Fesenko I, **Spechenkova N**, Mamaeva A, Makhotenko AV, Love AJ, Kalinina NO, Taliatsky M (2020). Role of the methionine cycle in the temperature-sensitive responses of potato plants to potato virus Y. *Mol Plant Pathol* 22 (1), 77–91, [10.1111/mpp.13009](https://doi.org/10.1111/mpp.13009)
17. Ignatov AN, **Spechenkova NA**, Taliatsky M, Kornev KP (2019). First report of *Clavibacter michiganensis* subsp. *michiganensis* infecting potato in Russia. *PLANT DIS* 103 (1), 147, [10.1094/PDIS-04-18-0691-PDN](https://doi.org/10.1094/PDIS-04-18-0691-PDN)
18. Makarova SS, Khromov AV, **Spechenkova NA**, Taliatsky ME, Kalinina NO (2018). Application of the CRISPR/Cas System for Generation of Pathogen-Resistant Plants. *Biochemistry (Mosc)* 83 (12-13), 1552–1562, [10.1134/S0006297918120131](https://doi.org/10.1134/S0006297918120131)
19. Makarova S, Makhotenko A, **Spechenkova N**, Love AJ, Kalinina NO, Taliatsky M (2018). Interactive Responses of Potato (*Solanum tuberosum* L.) Plants to Heat Stress and Infection With Potato Virus Y. *Front Microbiol* 9, 2582, [10.3389/fmicb.2018.02582](https://doi.org/10.3389/fmicb.2018.02582)
20. Ignatov AN, Panycheva JS, **Spechenkova N**, Taliatsky M (2018). First report of *Clavibacter michiganensis* subsp. *sepedonicus* infecting sugar beet in Russia. *PLANT DIS* 102 (12), 2634, [10.1094/PDIS-04-18-0693-PDN](https://doi.org/10.1094/PDIS-04-18-0693-PDN)