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Адрес

Федеральное государственное бюджетное учреждение науки Институт биоорганической химии им. академиков М.М. Шемякина и Ю.А. Овчинникова Российской академии наук, Москва, Россия

Контакты

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Образование

1995–2000	Россия, Москва	МГУ им. Ломоносова
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Работа в ИБХ

	Заведующий лабораторией
2018–наст.вр.	Главный научный сотрудник
2019–наст.вр.	Главный научный сотрудник
2018–2022	Заведующий лабораторией

Членство в советах и комиссиях ИБХ

	Ученый совет
2022–наст.вр.	Аттестационная комиссия

Награды

2012	Премия президента в области науки и инноваций для молодых ученых	За разработку генетически кодируемых флуоресцентных маркёров для визуализации объектов и процессов в биомедицинских исследованиях
2004	Медали РАН для молодых ученых и студентов с премией	За работу «Флуоресцентные и фотоактивируемые флуоресцентные белки»

Научные интересы

Специалист в области адаптивного иммунитета, автор более 150 работ в рецензируемых научных журналах, ряда международных патентов. Индекс Хирша - 55, цитирований - 10000. Принимал участие в более чем 50 международных конференциях.

Членство в сообществах

Член Совета по грантам Президента РФ для государственной поддержки молодых российских ученых (2013-2016), член Совета по науке при Министерстве образования и науки РФ (2013-2016). Эксперт научных фондов РФФИ, РНФ, европейских научных фондов.

Степени и звания

2022	Член-корреспондент РАН
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2016	Профессор РАН
2011	Доктор наук (Биологические науки, 03.00.03 — Молекулярная биология)
2003	Кандидат наук (Биологические науки)

Гранты и проекты

2014– 2016	Возрастные изменения в структуре гуморального иммунитета
2019– 2021	Происхождение и пластичность функциональных популяций В лимфоцитов и плазматических клеток
2017– 2019	Сравнительный биоинформатический анализ гамма/дельта Т-клеточных рецепторов человека

Публикации

1. Nakonechnaya TO, Moltedo B, Putintseva EV, Leyn S, Bolotin DA, Britanova OV, Shugay M, **Chudakov DM** (2024). Convergence, plasticity, and tissue residence of regulatory T cell response via TCR repertoire prism. *Elife* 12, , [10.7554/eLife.89382](#)
2. Sheetikov SA, Khmelevskaya AA, Zornikova KV, Zvyagin IV, Shomuradova AS, Serdyuk YV, Shakirova NT, Peshkova IO, Titov A, Romaniuk DS, Shagina IA, **Chudakov DM**, Kiryukhin DO, Shcherbakova OV, Khamaganova EG, Dzutseva V, Afanasiev A, Bogolyubova AV, Efimov GA (2024). Clonal structure and the specificity of vaccine-induced T cell response to SARS-CoV-2 Spike protein. *Front Immunol* 15, 1369436, [10.3389/fimmu.2024.1369436](#)
3. Bryushkova EA, Mushenkova NV, Turchaninova MA, Lukyanov DK, **Chudakov DM**, Serebrovskaya EO (2024). B cell clonality in cancer. *Semin Immunol* 72, 101874, [10.1016/j.smim.2024.101874](#)
4. Ustiuzhanina MO, Streltsova MA, Timofeev ND, Kryukov MA, **Chudakov DM**, Kovalenko EI (2024). Autologous T-Cell-Free Antigen Presentation System Unveils hCMV-Specific NK Cell Response. *Cells* 13 (6), 530, [10.3390/cells13060530](#)
5. Serebrovskaya EO, Bryushkova EA, Lukyanov DK, Mushenkova NV, **Chudakov DM**, Turchaninova MA (2024). Toolkit for mapping the clonal landscape of tumor-infiltrating B cells. *Semin Immunol* 72, 101864, [10.1016/j.smim.2024.101864](#)
6. Britanova OV, Lupyr KR, Staroverov DB, Shagina IA, Aleksandrov AA, Ustyugov YY, Somov DV, Klimenko A, Shostak NA, Zvyagin IV, Stepanov AV, Merzlyak EM, Davydov AN, Izraelson M, Egorov ES, Bogdanova EA, Vladimirova AK, Iakovlev PA, Fedorenko DA, Ivanov RA, Skvortsova VI, Lukyanov S, **Chudakov DM** (2023). Targeted depletion of TRBV9+ T cells as immunotherapy in a patient with ankylosing spondylitis. *Nat Med* , , [10.1038/s41591-023-02613-z](#)
7. Smirnova AO, Miroshnichenkova AM, Belyaeva LD, Kelmanson IV, Lebedev YB, Mamedov IZ, **Chudakov DM**, Komkov AY (2023). Novel bimodal TRBD1-TRBD2 rearrangements with dual or absent D-region contribute to TRB V-(D)-J combinatorial diversity. *Front Immunol* 14, 1245175, [10.3389/fimmu.2023.1245175](#)
8. Shcherbinin DS, Karnaukhov VK, Zvyagin IV, **Chudakov DM**, Shugay M (2023). Large-scale template-based structural modeling of T-cell receptors with known antigen specificity reveals complementarity features. *Front Immunol* 14, 1224969, [10.3389/fimmu.2023.1224969](#)
9. Clement M, Ladell K, Miners KL, Marsden M, Chapman L, Cardus Figueras A, Scott J, Andrews R, Clare S, Kriukova VV, Lupyr KR, Britanova OV, Withers DR, Jones SA, **Chudakov DM**, Price DA, Humphreys IR (2023). Inhibitory IL-10-producing CD4+ T cells are T-bet-dependent and facilitate cytomegalovirus persistence via coexpression of arginase-1. *Elife* 12, , [10.7554/eLife.79165](#)
10. Friman V, Quinti I, Davydov AN, Shugay M, Farroni C, Engström E, Pour Akaber S, Barresi S, Mohamed A, Pulvirenti F, Milito C, Granata G, Giorda E, Ahlström S, Karlsson J, Marasco E, Marcellini V, Bocci C, Cascioli S, Scarsella M, Phad G, Tilevik A, Tartaglia M, Bemark M, **Chudakov DM**, Carsetti R, Grimsholm O (2023). Defective peripheral B cell selection in common variable immune deficiency patients with autoimmune

- manifestations. *Cell Rep* 42 (5), 112446, [10.1016/j.celrep.2023.112446](https://doi.org/10.1016/j.celrep.2023.112446)
11. Smirnova AO, Miroshnichenkova AM, Olshanskaya YV, Maschan MA, Lebedev YB, **Chudakov DM**, Mamedov IZ, Komkov A (2023). The use of non-functional clonotypes as a natural calibrator for quantitative bias correction in adaptive immune receptor repertoire profiling. *Elife* 12, , [10.7554/eLife.69157](https://doi.org/10.7554/eLife.69157)
 12. Ustiuizhanina MO, Vavilova JD, Alekseeva NA, Lutsenko GV, **Chudakov DM**, Kovalenko EI (2023). COORDINATION OF NK CELL MARKER EXPRESSION AND IgG RESPONSE IN hCMV INFECTION. *Medical Immunology (Russia)* 25 (3), 573–580, [10.15789/1563-0625-CON-2844](https://doi.org/10.15789/1563-0625-CON-2844)
 13. Karnaukhov V, Paes W, Woodhouse IB, Partridge T, Nicastrì A, Brackenridge S, Shcherbinin D, **Chudakov DM**, Zvyagin IV, Ternette N, Koohy H, Borrow P, Shugay M (2022). HLA variants have different preferences to present proteins with specific molecular functions which are complemented in frequent haplotypes. *Front Immunol* 13, 1067463, [10.3389/fimmu.2022.1067463](https://doi.org/10.3389/fimmu.2022.1067463)
 14. Yang X, Garner LI, Zvyagin IV, Paley MA, Komech EA, Jude KM, Zhao X, Fernandes RA, Hassman LM, Paley GL, Savvides CS, Brackenridge S, Quastel MN, **Chudakov DM**, Bowness P, Yokoyama WM, McMichael AJ, Gillespie GM, Garcia KC (2022). Autoimmunity-associated T cell receptors recognize HLA-B*27-bound peptides. *Nature* 612 (7941), 771–777, [10.1038/s41586-022-05501-7](https://doi.org/10.1038/s41586-022-05501-7)
 15. Mikelov AI, Alekseeva EI, Komech EA, Staroverov DB, Turchaninova MA, Shugay M, **Chudakov DM**, Bazykin GA, Zvyagin IV (2022). Memory persistence and differentiation into antibody-secreting cells accompanied by positive selection in longitudinal BCR repertoires. *Elife* 11, , [10.7554/eLife.79254](https://doi.org/10.7554/eLife.79254)
 16. Lebedin M, Foglierini M, Khorkova S, Vázquez García C, Ratswohl C, Davydov AN, Turchaninova MA, Daubenberger C, **Chudakov DM**, Lanzavecchia A, de la Rosa K (2022). Different classes of genomic inserts contribute to human antibody diversity. *Proc Natl Acad Sci U S A* 119 (36), e2205470119, [10.1073/pnas.2205470119](https://doi.org/10.1073/pnas.2205470119)
 17. Bryushkova EA, Skatova VD, Mutovina ZY, Zagrebneva AI, Fomina DS, Kruglova TS, Akopyan AA, Strazhesko ID, Lukyanov SA, Tkacheva ON, Lysenko MA, **Chudakov DM** (2022). Tocilizumab, netakimab, and baricitinib in patients with mild-to-moderate COVID-19: An observational study. *PLoS One* 17 (8), e0273340, [10.1371/journal.pone.0273340](https://doi.org/10.1371/journal.pone.0273340)
 18. Lomakin YA, Zvyagin IV, Ovchinnikova LA, Kabilov MR, Staroverov DB, Mikelov A, Tupikin AE, Zakharova MY, Bykova NA, Mukhina VS, Favorov AV, Ivanova M, Simaniv T, Rubtsov YP, **Chudakov DM**, Zakharova MN, Illarioshkin SN, Belogurov AA, Gabibov AG (2022). Deconvolution of B cell receptor repertoire in multiple sclerosis patients revealed a delay in tBreg maturation. *Front Immunol* 13, 803229, [10.3389/fimmu.2022.803229](https://doi.org/10.3389/fimmu.2022.803229)
 19. Goncharov M, Bagaev D, Shcherbinin D, Zvyagin I, Bolotin D, Thomas PG, Minervina AA, Pogorelyy MV, Ladell K, McLaren JE, Price DA, Nguyen THO, Rowntree LC, Clemens EB, Kedzierska K, Dolton G, Rius CR, Sewell A, Samir J, Luciani F, Zornikova KV, Khmelevskaya AA, Sheetikov SA, Efimov GA, **Chudakov D**, Shugay M (2022). VDJdb in the pandemic era: a compendium of T cell receptors specific for SARS-CoV-2. *Nat Methods* 19 (9), 1017–1019, [10.1038/s41592-022-01578-0](https://doi.org/10.1038/s41592-022-01578-0)
 20. Goncharov MM, Bryushkova EA, Sharayev NI, Skatova VD, Baryshnikova AM, Sharonov GV, Karnaukhov V, Vakhitova MT, Samoylenko IV, Demidov LV, Lukyanov S, **Chudakov DM**, Serebrovskaya EO (2022). Pinpointing the tumor-specific T-cells via TCR clusters. *Elife* 11, , [10.7554/eLife.77274](https://doi.org/10.7554/eLife.77274)
 21. Zhitnyuk YV, Koval AP, Alferov AA, Shtykova YA, Mamedov IZ, Kushlinskii NE, **Chudakov DM**, Shcherbo DS (2022). Deep cfDNA fragment end profiling enables cancer detection. *Mol Cancer* 21 (1), 26, [10.1186/s12943-021-01491-8](https://doi.org/10.1186/s12943-021-01491-8)
 22. Dyugay IA, Lukyanov DK, Turchaninova MA, Serebrovskaya EO, Bryushkova EA, Zaretsky AR, Khalmurzaev O, Matveev VB, Shugay M, Shelyakin PV, **Chudakov DM** (2022). Accounting for B-cell behavior and sampling bias predicts anti-PD-L1 response in bladder cancer. *Cancer Immunol Res* 10 (3), 343–353, [10.1158/2326-6066.CIR-21-0489](https://doi.org/10.1158/2326-6066.CIR-21-0489)
 23. Shelyakin PV, Lupyr KR, Egorov ES, Kofiadi IA, Staroverov DB, Kasatskaya SA, Kriukova VV, Shagina IA, Merzlyak EM, Nakonechnaya TO, Latysheva EA, Manto IA, Khaitov MR, Lukyanov SA, **Chudakov DM**, Britanova OV (2021). Naïve Regulatory T Cell Subset Is Altered in X-Linked Agammaglobulinemia. *Front Immunol* 12, 697307, [10.3389/fimmu.2021.697307](https://doi.org/10.3389/fimmu.2021.697307)
 24. Izraelson M, Metsger M, Davydov AN, Shagina IA, Dronina MA, Obratsova AS, Miskevich DA, Mamedov IZ, Volchkova LN, Nakonechnaya TO, Shugay M, Bolotin DA, Staroverov DB, Sharonov GV, Kondratyuk EY,

- Zagaynova EV, Lukyanov S, Shams I, Britanova OV, **Chudakov DM** (2021). Distinct organization of adaptive immunity in the long-lived rodent *Spalax galili*. *Nat Aging* 1 (2), 179–189, [10.1038/s43587-021-00029-3](https://doi.org/10.1038/s43587-021-00029-3)
25. Maiorova V, Mollaev MD, Vikhrev P, Kulakovskaya E, Pershin D, **Chudakov DM**, Kibardin A, Maschan MA, Larin S (2021). Natural Flt3Lg-based chimeric antigen receptor (Flt3-CAR) T cells successfully target Flt3 on aml cell lines. *Vaccines (Basel)* 9 (11), , [10.3390/vaccines9111238](https://doi.org/10.3390/vaccines9111238)
 26. Izosimova AV, Yuzhakova DV, Skatova VD, Volchkova LN, Zagaynova EV, **Chudakov DM**, Sharonov GV (2021). Deciphering repertoire of b16 melanoma reactive tcrs by immunization, in vitro restimulation and sequencing of ifny-secreting t cells. *Int J Mol Sci* 22 (18), , [10.3390/ijms22189859](https://doi.org/10.3390/ijms22189859)
 27. (конференция) Звягин ИВ, Комеч ЕА, **Чудаков ДМ** (2021). AS-RELATED TCR BETA CLONOTYPES ARE PRESENT IN DIFFERENT INFLAMED TISSUES OF PATIENTS WITH SPONDYLOARTHROPATHIES. *Ann Rheum Dis* (80), 14–15, [10.1136/annrheumdis-2021-eular.3535](https://doi.org/10.1136/annrheumdis-2021-eular.3535)
 28. Karnaukhov V, Paes W, Woodhouse IB, Partridge T, Nicastrì A, Brackenridge S, Scherbinin D, **Chudakov DM**, Zvyagin IV, Ternette N, Koohy H, Borrow P, Shugay M (2021). HLA binding of self-peptides is biased towards proteins with specific molecular functions. *Biorxiv* , , [10.1101/2021.02.16.431395](https://doi.org/10.1101/2021.02.16.431395)
 29. Barennes P, Quiniou V, Shugay M, Egorov ES, Davydov AN, **Chudakov DM**, Uddin I, Ismail M, Oakes T, Chain B, Eugster A, Kashofer K, Rainer PP, Darko S, Ransier A, Douek DC, Klatzmann D, Mariotti-Ferrandiz E (2021). Benchmarking of T cell receptor repertoire profiling methods reveals large systematic biases. *Nat Biotechnol* 39 (2), 236–245, [10.1038/s41587-020-0656-3](https://doi.org/10.1038/s41587-020-0656-3)
 30. Minervina AA, Komech EA, Titov A, Koraichi MB, Rosati E, Mamedov IZ, Franke A, Efimov GA, **Chudakov DM**, Mora T, Walczak AM, Lebedev YB, Pogorelyy MV (2021). Longitudinal high-throughput TCR repertoire profiling reveals the dynamics of T-cell memory formation after mild COVID-19 infection. *Elife* 10, 1–17, [10.7554/eLife.63502](https://doi.org/10.7554/eLife.63502)
 31. Kasatskaya SA, Ladell K, Egorov ES, Miners KL, Davydov AN, Metsger M, Staroverov DB, Matveishina EK, Shagina IA, Mamedov IZ, Izraelson M, Shelyakin PV, Britanova OV, Price DA, **Chudakov DM** (2020). Functionally specialized human CD4 T cell subsets express physicochemically distinct TCRs. *Elife* 9, 1–22, [10.7554/eLife.57063](https://doi.org/10.7554/eLife.57063)
 32. Kalinina AA, Nesterenko LN, Bruter AV, Balunets DV, **Chudakov DM**, Izraelson M, Britanova OV, Khromykh LM, Kazansky DB (2020). Adoptive Immunotherapy Based on Chain-Centric TCRs in Treatment of Infectious Diseases. *iScience* 23 (12), 101854, [10.1016/j.isci.2020.101854](https://doi.org/10.1016/j.isci.2020.101854)
 33. Blagov S, Zvyagin IV, Shelikhova L, Khismatullina R, Balashov D, Komech E, Fomchenkova V, Shugay M, Starichkova J, Kurnikova E, Pershin D, Fadeeva M, Glushkova S, Muzalevskii Y, Kazachenok A, Efimenko M, Osipova E, Novichkova G, **Chudakov D**, Maschan A, Maschan M (2020). T-cell tracking, safety, and effect of low-dose donor memory T-cell infusions after $\alpha\beta$ T cell-depleted hematopoietic stem cell transplantation. *Bone Marrow Transplant* 56 (4), 900–908, [10.1038/s41409-020-01128-2](https://doi.org/10.1038/s41409-020-01128-2)
 34. Galletti G, De Simone G, Mazza EMC, Puccio S, Mezzanotte C, Bi TM, Davydov AN, Metsger M, Scamardella E, Alvisi G, De Paoli F, Zanon V, Scarpa A, Camisa B, Colombo FS, Anselmo A, Peano C, Polletti S, Mavilio D, Gattinoni L, Boi SK, Youngblood BA, Jones RE, Baird DM, Gostick E, Llewellyn-Lacey S, Ladell K, Price DA, **Chudakov DM**, Newell EW, Casucci M, Lugli E (2020). Two subsets of stem-like CD8+ memory T cell progenitors with distinct fate commitments in humans. *Nat Immunol* 21 (12), 1552–1562, [10.1038/s41590-020-0791-5](https://doi.org/10.1038/s41590-020-0791-5)
 35. Logunova NN, Kriukova VV, Shelyakin PV, Egorov ES, Pereverzeva A, Bozhanova NG, Shugay M, Shcherbinin DS, Pogorelyy MV, Merzlyak EM, Zubov VN, Meiler J, **Chudakov DM**, Apt AS, Britanova OV (2020). MHC-II alleles shape the CDR3 repertoires of conventional and regulatory naïve CD4 T cells. *Proc Natl Acad Sci U S A* 117 (24), 13659–13669, [10.1073/pnas.2003170117](https://doi.org/10.1073/pnas.2003170117)
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39. Janssen A, Villacorta Hidalgo J, Beringer DX, van Dooremalen S, Fernando F, van Diest E, Terrizi AR, Bronsert P, Kock S, Schmitt-Gräff A, Werner M, Heise K, Follo M, Straetmans T, Sebestyen Z, **Chudakov DM**, Kasatskaya SA, Frenkel FE, Ravens S, Spierings E, Prinz I, Küppers R, Malkovsky M, Fisch P, Kuball J (2020). γδ T-cell Receptors Derived from Breast Cancer-Infiltrating T Lymphocytes Mediate Antitumor Reactivity. *Cancer Immunol Res* 8 (4), 530–543, [10.1158/2326-6066.CIR-19-0513](https://doi.org/10.1158/2326-6066.CIR-19-0513)
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