## Alexander V Mazin

## List of Publications by Year in descending order

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1 Transcript-RNA-templated DNA recombination and repair. Nature, 2014, 515, 436-439.
$\mathrm{Ca} 2+$ activates human homologous recombination protein Rad51 by modulating its ATPase activity. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9988-9993.

Identification of Specific Inhibitors of Human RAD5 1 Recombinase Using High-Throughput Screening. ACS Chemical Biology, $2011,6,628-635$.

4 Rad54 protein promotes branch migration of Holliday junctions. Nature, 2006, 442, 590-593.
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5 A Novel Function of Rad54 Protein. Journal of Biological Chemistry, 2003, 278, 14029-14036.
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6 Rad54, the motor of homologous recombination. DNA Repair, 2010, 9, 286-302.
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7 Tailed duplex DNA is the preferred substrate for Rad51 protein-mediated homologous pairing. EMBO
7 Journal, 2000, 19, 1148-1156.

Rad52 Inverse Strand Exchange Drives RNA-Templated DNA Double-Strand Break Repair. Molecular Cell, 2017, 67, 19-29.e3.

Human Rad52 binds and wraps single-stranded DNA and mediates annealing via two hRad52â€"ssDNA
$9 \quad \begin{aligned} & \text { Human Rad52 binds and wraps single-stranded DNA and med } \\ & \text { complexes. Nucleic Acids Research, 2010, 38, 2917-2930. }\end{aligned}$

Inhibition of Homologous Recombination in Human Cells by Targeting RAD51 Recombinase. Journal of
10 Medicinal Chemistry, 2012, 55, 3011-3020.
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11 A Small Molecule Inhibitor of Human RAD5 1 Potentiates Breast Cancer Cell Killing by Therapeutic
Agents in Mouse Xenografts. PLoS ONE, 2014, 9, e100993.
12 Rad54 dissociates homologous recombination intermediates by branch migration. Nature Structural and Molecular Biology, 2007, 14, 746-753.
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Targeting BRCA1- and BRCA2-deficient cells with RAD52 small molecule inhibitors. Nucleic Acids
Research, 2016, 44, 4189-4199.
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BRCA2 regulates DMC1-mediated recombination through the BRC repeats. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3515-3520.
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Cooperation of RAD5 1 and RAD54 in regression of a model replication fork. Nucleic Acids Research,
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2011, 39, 2153-2164.

Human Rad54 Protein Stimulates DNA Strand Exchange Activity of hRad51 Protein in the Presence of
Ca2+. Journal of Biological Chemistry, 2004, 279, 52042-52051.
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Simultaneous Targeting of PARP1 and RAD52 Triggers Dual Synthetic Lethality in BRCA-Deficient Tumor
Cells. Cell Reports, 2018, 23, 3127-3136.
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FANCA Promotes DNA Double-Strand Break Repair by Catalyzing Single-Strand Annealing and Strand
Exchange. Molecular Cell, 2018, 71, 621-628.e4.
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20 HOP2-MND1 modulates RAD51 binding to nucleotides and DNA. Nature Communications, 2014, 5, 4198. 12.8
The resistance of DMC1 D-loops to dissociation may account for the DMC1 requirement in meiosis.
21 Nature Structural and Molecular Biology, 2011, 18, 56-60.

A high-throughput chemical screen with FDA approved drugs reveals that the antihypertensive drug

| 22 | Spironolactone impairs cancer cell survival by inhibiting homology directed repair. Nucleic Acids <br> Research, 2014, 42, 5689-5701. |
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| 14.5 | 35 |

23 Interactions of Human Rad54 Protein with Branched DNA Molecules*. Journal of Biological Chemistry, 3.4 ..... 31
24 RAD52: Paradigm of Synthetic Lethality and New Developments. Frontiers in Genetics, 2021, 12, 780293. ..... 2.3 ..... 30
25 Genetic Characterization of Three Distinct Mechanisms Supporting RNA-Driven DNA Repair and
Modification Reveals Major Role of DNA Polymerase îq. Molecular Cell, 2020, 79, 1037-1050.e5. ..... 9.7 ..... 29Polarity and Bypass of DNA Heterology during Branch Migration of Holliday Junctions by HumanRAD54, BLM, and RECQ1 Proteins. Journal of Biological Chemistry, 2012, 287, 11820-11832.$3.4 \quad 28$RAD54 N-terminal domain is a DNA sensor that couples ATP hydrolysis with branch migration of27 Holliday junctions. Nature Communications, 2018, 9, 34.
Replication protein A binds RNA and promotes R-loop formation. Journal of Biological Chemistry,
3.426
2020, 295, 14203-14213. 28
29 A novel landscape of nuclear human CDK2 substrates revealed by in situ phosphorylation. Science Advances, 2020, 6, eaaz9899.
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30 New RAD51 Inhibitors to Target Homologous Recombination in Human Cells. Genes, 2021, 12, 920.2.422
31 Targeting the homologous recombination pathway by small molecule modulators. Bioorganic and 2.2 ..... 18 Medicinal Chemistry Letters, 2014, 24, 3006-3013.The RecA/RAD51 protein drives migration of Holliday junctions via polymerization on DNA. Proceedingsof the National Academy of Sciences of the United States of America, 2011, 108, 6432-6437.$7.1 \quad 17$The function of RAD52 N-terminal domain is essential for viability of BRCA-deficient cells. Nucleic17
33 Acids Research, 2020, 48, 12778-12791.

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[^0]:    Analysis of branch migration activities of proteins using synthetic DNA substrates. Protocol

