# Xue-Hai Liang

List of Publications by Year
in descending order



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|---|---|---|---|
| 57 papers | 3,983 citations | 109311 35 h-index | 144002 57 g-index |
| 57 all docs | 57 docs citations | 57 times ranked | 3207 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Cellular uptake and trafficking of antisense oligonucleotides. Nature Biotechnology, 2017, 35, 230-237. | 17.5 | 416 |
| 2 | Antisense technology: an overview and prospectus. Nature Reviews Drug Discovery, 2021, 20, 427-453. | 46.4 | 299 |
| 3 | Chemical modification of PS-ASO therapeutics reduces cellular protein-binding and improves the therapeutic index. Nature Biotechnology, 2019, 37, 640-650. | 17.5 | 205 |
| 4 | rRNA Modifications in an Intersubunit Bridge of the Ribosome Strongly Affect Both Ribosome Biogenesis and Activity. Molecular Cell, 2007, 28, 965-977. | 9.7 | 192 |
| 5 | Loss of rRNA modifications in the decoding center of the ribosome impairs translation and strongly delays pre-rRNA processing. Rna, 2009, 15, 1716-1728. | 3.5 | 186 |
| 6 | RNase H1-Dependent Antisense Oligonucleotides Are Robustly Active in Directing RNA Cleavage in Both the Cytoplasm and the Nucleus. Molecular Therapy, 2017, 25, 2075-2092. | 8.2 | 168 |
| 7 | Phosphorothioate modified oligonucleotideâ€“protein interactions. Nucleic Acids Research, 2020, 48, 5235-5253. | 14.5 | 163 |
| 8 | Identification and characterization of intracellular proteins that bind oligonucleotides with phosphorothioate linkages. Nucleic Acids Research, 2015, 43, 2927-2945. | 14.5 | 151 |
| 9 | Antisense technology: A review. Journal of Biological Chemistry, 2021, 296, 100416. | 3.4 | 149 |
| 10 | Translation efficiency of mRNAs is increased by antisense oligonucleotides targeting upstream open reading frames. Nature Biotechnology, 2016, 34, 875-880. | 17.5 | 137 |
| 11 | 2â€²-Fluoro-modified phosphorothioate oligonucleotide can cause rapid degradation of P54nrb and PSF. Nucleic Acids Research, 2015, 43, 4569-4578. | 14.5 | 97 |
| 12 | Phosphorothioate oligonucleotides can displace<i>NEAT1</i>RNA and form nuclear paraspeckle-like structures. Nucleic Acids Research, 2014, 42, 8648-8662. | 14.5 | 87 |
| 13 | Viable<i>RNaseH1</i>knockout mice show RNaseH1 is essential for R loop processing, mitochondrial and liver function. Nucleic Acids Research, 2016, 44, 5299-5312. | 14.5 | 84 |
| 14 | Antisense oligonucleotides targeting translation inhibitory elements in 5â€² UTRs can selectively increase protein levels. Nucleic Acids Research, 2017, 45, 9528-9546. | 14.5 | 83 |
| 15 | TCP1 complex proteins interact with phosphorothioate oligonucleotides and can co-localize in oligonucleotide-induced nuclear bodies in mammalian cells. Nucleic Acids Research, 2014, 42, 7819-7832. | 14.5 | 80 |
| 16 | Site-specific replacement of phosphorothioate with alkyl phosphonate linkages enhances the therapeutic profile of gapmer ASOs by modulating interactions with cellular proteins. Nucleic Acids Research, 2019, 47, 5465-5479. | 14.5 | 77 |
| 17 | The Interaction of Phosphorothioate-Containing RNA Targeted Drugs with Proteins Is a Critical Determinant of the Therapeutic Effects of These Agents. Journal of the American Chemical Society, 2020, 142, 14754-14771. | 13.7 | 77 |
| 18 | The Helicase Has1p Is Required for snoRNA Release from Pre-rRNA. Molecular and Cellular Biology, 2006, 26, 7437-7450. | 2.3 | 75 |

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|---|---|---|---|
| 19 | Acute hepatotoxicity of 2â€² fluoro-modified 5â€“10â€“5 gapmer phosphorothioate oligonucleotides in mice correlates with intracellular protein binding and the loss of DBHS proteins. Nucleic Acids Research, 2018, 46, 2204-2217. | 14.5 | 71 |
| 20 | Hsp90 protein interacts with phosphorothioate oligonucleotides containing hydrophobic 2â€²-modifications and enhances antisense activity. Nucleic Acids Research, 2016, 44, 3892-3907. | 14.5 | 65 |
| 21 | Understanding the effect of controlling phosphorothioate chirality in the DNA gap on the potency and safety of gapmer antisense oligonucleotides. Nucleic Acids Research, 2020, 48, 1691-1700. | 14.5 | 63 |
| 22 | Efficient and specific knockdown of small non-coding RNAs in mammalian cells and in mice. Nucleic Acids Research, 2011, 39, e13-e13. | 14.5 | 62 |
| 23 | Towards next generation antisense oligonucleotides: mesylphosphoramidate modification improves therapeutic index and duration of effect of gapmer antisense oligonucleotides. Nucleic Acids Research, 2021, 49, 9026-9041. | 14.5 | 61 |
| 24 | Intra-endosomal trafficking mediated by lysobisphosphatidic acid contributes to intracellular release of phosphorothioate-modified antisense oligonucleotides. Nucleic Acids Research, 2017, 45, 5309-5322. | 14.5 | 60 |
| 25 | Annexin A2 facilitates endocytic trafficking of antisense oligonucleotides. Nucleic Acids Research, 2016, 44, gkw595. | 14.5 | 58 |
| 26 | Cellular uptake mediated by epidermal growth factor receptor facilitates the intracellular activity of phosphorothioate-modified antisense oligonucleotides. Nucleic Acids Research, 2018, 46, 3579-3594. | 14.5 | 58 |
| 27 | RNA cleavage products generated by antisense oligonucleotides and siRNAs are processed by the RNA surveillance machinery. Nucleic Acids Research, 2016, 44, 3351-3363. | 14.5 | 57 |
| 28 | Origins of the Increased Affinity of Phosphorothioate-Modified Therapeutic Nucleic Acids for Proteins. Journal of the American Chemical Society, 2020, 142, 7456-7468. | 13.7 | 56 |
| 29 | Antisense drug discovery and development technology considered in a pharmacological context. Biochemical Pharmacology, 2021, 189, 114196. | 4.4 | 55 |
| 30 | Depletion of key protein components of the RISC pathway impairs pre-ribosomal RNA processing. Nucleic Acids Research, 2011, 39, 4875-4889. | 14.5 | 50 |
| 31 | Nucleic acid binding proteins affect the subcellular distribution of phosphorothioate antisense oligonucleotides. Nucleic Acids Research, 2017, 45, 10649-10671. | 14.5 | 50 |
| 32 | Lipid Conjugates Enhance Endosomal Release of Antisense Oligonucleotides Into Cells. Nucleic Acid Therapeutics, 2019, 29, 245-255. | 3.6 | 48 |
| 33 | Dynamic nucleoplasmic and nucleolar localization of mammalian RNase H1 in response to RNAP I transcriptional R-loops. Nucleic Acids Research, 2017, 45, 10672-10692. | 14.5 | 44 |
| 34 | Human RNase H1 Is Associated with Protein P32 and Is Involved in Mitochondrial Pre-rRNA Processing. PLoS ONE, 2013, 8, e71006. | 2.5 | 43 |
| 35 | Transfection of siRNAs can alter miRNA levels and trigger non-specific protein degradation in mammalian cells. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2013, 1829, 455-468. | 1.9 | 36 |
| 36 | mRNA levels can be reduced by antisense oligonucleotides via no-go decay pathway. Nucleic Acids Research, 2019, 47, 6900-6916. | 14.5 | 32 |

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|---|---|---|---|
| 37 | Golgi-endosome transport mediated by M6PR facilitates release of antisense oligonucleotides from endosomes. Nucleic Acids Research, 2020, 48, 1372-1391. | 14.5 | 32 |
| 38 | COPII vesicles can affect the activity of antisense oligonucleotides by facilitating the release of oligonucleotides from endocytic pathways. Nucleic Acids Research, 2018, 46, 10225-10245. | 14.5 | 31 |
| 39 | Site-specific incorporation of 5â€²-methyl DNA enhances the therapeutic profile of gapmer ASOs. Nucleic Acids Research, 2021, 49, 1828-1839. | 14.5 | 26 |
| 40 | Depletion of NEAT1 lncRNA attenuates nucleolar stress by releasing sequestered P54nrb and PSF to facilitate c-Myc translation. PLoS ONE, 2017, 12, e0173494. | 2.5 | 26 |
| 41 | Strong dependence between functional domains in a dual-function snoRNA infers coupling of rRNA processing and modification events. Nucleic Acids Research, 2010, 38, 3376-3387. | 14.5 | 17 |
| 42 | Translation can affect the antisense activity of RNase H1-dependent oligonucleotides targeting mRNAs. Nucleic Acids Research, 2018, 46, 293-313. | 14.5 | 15 |
| 43 | Membrane Destabilization Induced by Lipid Species Increases Activity of Phosphorothioate-Antisense Oligonucleotides. Molecular Therapy - Nucleic Acids, 2018, 13, 686-698. | 5.1 | 15 |
| 44 | Specific Increase of Protein Levels by Enhancing Translation Using Antisense Oligonucleotides Targeting Upstream Open Frames. Advances in Experimental Medicine and Biology, 2017, 983, 129-146. | 1.6 | 15 |
| 45 | Some ASOs that bind in the coding region of mRNAs and induce RNase H1 cleavage can cause increases in the pre-mRNAs that may blunt total activity. Nucleic Acids Research, 2020, 48, 9840-9858. | 14.5 | 14 |
| 46 | Site-specific Incorporation of 2â€²,5â€²-Linked Nucleic Acids Enhances Therapeutic Profile of Antisense Oligonucleotides. ACS Medicinal Chemistry Letters, 2021, 12, 922-927. | 2.8 | 13 |
| 47 | RNA helicase A is not required for RISC activity. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2013, 1829, 1092-1101. | 1.9 | 10 |
| 48 | Binding of phosphorothioate oligonucleotides with RNase H1 can cause conformational changes in the protein and alter the interactions of RNase H1 with other proteins. Nucleic Acids Research, 2021, 49, 2721-2739. | 14.5 | 10 |
| 49 | Solid-Phase Separation of Toxic Phosphorothioate Antisense Oligonucleotide-Protein Nucleolar Aggregates Is Cytoprotective. Nucleic Acid Therapeutics, 2021, 31, 126-144. | 3.6 | 10 |
| 50 | Structural basis of dimerization and nucleic acid binding of human DBHS proteins NONO and PSPC1. Nucleic Acids Research, 2022, 50, 522-535. | 14.5 | 10 |
| 51 | Phosphorothioate Antisense Oligonucleotides Bind P-Body Proteins and Mediate P-Body Assembly. Nucleic Acid Therapeutics, 2019, 29, 343-358. | 3.6 | 9 |
| 52 | Gapmer Antisense Oligonucleotides Targeting 5S Ribosomal RNA Can Reduce Mature 5S Ribosomal RNA by Two Mechanisms. Nucleic Acid Therapeutics, 2020, 30, 312-324. | 3.6 | 7 |
| 53 | Golgi-58K can re-localize to late endosomes upon cellular uptake of PS-ASOs and facilitates endosomal release of ASOs. Nucleic Acids Research, 2021, 49, 8277-8293. | 14.5 | 7 |
| 54 | RNA modifications can affect RNase H1-mediated PS-ASO activity. Molecular Therapy - Nucleic Acids, 2022, 28, 814-828. | 5.1 | 7 |

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| 55 | Insights into innate immune activation via PS-ASOâ€“proteinâ€“TLR9 interactions. Nucleic Acids Research, 2022, 50, 8107-8126. | 14.5 | 7 |
| 56 | Hsc70 Facilitates Mannose-6-Phosphate Receptor-Mediated Intracellular Trafficking and Enhances Endosomal Release of Phosphorothioate-Modified Antisense Oligonucleotides. Nucleic Acid Therapeutics, 2021, 31, 284-297. | 3.6 | 4 |
| 57 | Perinuclear positioning of endosomes can affect PS-ASO activities. Nucleic Acids Research, 2021, 49, 12970-12985. | 14.5 | 3 |