

DITL Member Publications

2023

[Monitoring Disassembly and Cargo Release of Phase-Separated Peptide Coacervates with Native Mass Spectrometry.](#)

Cerrato CP, Leppert A, Sun Y, **Lane DP**, Arsenian-Henriksson M, Miserez A, Landreh M. *Anal Chem.* 2023 Jul 25;95(29):10869-10872. doi: 10.1021/acs.analchem.3c02384. Epub 2023 Jul 13. PMID: 37439740

[Editorial: Overcoming the cell membrane to target intracellular oncoproteins.](#)

Brown CJ, Li Y, Sabapathy K. *Front Oncol.* 2023 Jul 12;13:1222095. doi: 10.3389/fonc.2023.1222095. eCollection 2023. PMID: 37503327

[Ketogenic diet promotes tumor ferroptosis but induces relative corticosterone deficiency that accelerates cachexia.](#)

Ferrer M, Mourikis N, Davidson EE, Kleeman SO, Zaccaria M, Habel J, Rubino R, Gao Q, Flint TR, Young L, Connell CM, Lukey MJ, Goncalves MD, White EP, **Venkitaraman AR**, Janowitz T. *Cell Metab.* 2023 Jul 11;35(7):1147-1162.e7. doi: 10.1016/j.cmet.2023.05.008. Epub 2023 Jun 12. PMID: 37311455

[Further Characterization of Fungal Halogenase RadH and Its Homologs.](#)

Peh G, Gunawan GA, Tay T, Tiong E, Tan LL, Jiang S, Goh YL, Ye S, Wong J, **Brown CJ**, Zhao H, Ang EL, Wong FT, Lim YH. *Biomolecules.* 2023 Jul 6;13(7):1081. doi: 10.3390/biom13071081. PMID: 37509117

[Dose imbalance of DYRK1A kinase causes systemic progeroid status in Down syndrome by increasing the un-repaired DNA damage and reducing LaminB1 levels.](#)

Murray A, Gough G, Cindrić A, Vučković F, **Koschut D**, Borelli V, Petrović DJ, Bekavac A, Plečaš A, Hribljan V, Brunmeir R, Jurić J, Pučić-Baković M, Slana A, Deriš H, Frkatović A, Groet J, O'Brien NL, Chen HY, Yeap YJ, Delom F, Havlicek S, Gammon L, Hamburg S, Startin C, D'Souza H, Mitrečić D, Kero M, Odak L, Krušlin B, Krsnik Ž, Kostović I, Foo JN, Loh YH, Dunn NR, de la Luna S, Spector T, Barišić I, Thomas MSC, Strydom A, Franceschi C, Lauc G, Krištić J, Alić I, Nižetić D. *EBioMedicine.* 2023 Jul 5:104692. doi: 10.1016/j.ebiom.2023.104692. Online ahead of print. PMID: 37451904

[Liquid-Liquid Phase Separation Primes Spider Silk Proteins for Fiber Formation via a Conditional Sticker Domain.](#)

Leppert A, Chen G, Lama D, Sahin C, Railaite V, Shilkova O, Arndt T, Marklund EG, **Lane DP**, Rising A, Landreh M. *Nano Lett.* 2023 Jun 28;23(12):5836-5841. doi: 10.1021/acs.nanolett.3c00773. Epub 2023 Apr 21. PMID: 37084706

[Domain-specific p53 mutants activate EGFR by distinct mechanisms exposing tissue-independent therapeutic vulnerabilities.](#)

Ho TLF, Lee MY, Goh HC, Ng GYN, Lee JJH, Kannan S, Lim YT, Zhao T, Lim EKH, Phua CZJ, Lee YF, Lim RYX, Ng PJH, Yuan J, Chan DKH, Lieske B, Chong CS, Lee KC, Lum J, Cheong WK, Yeoh KG, Tan KK,

Sobota RM, Verma CS, **Lane DP**, Tam WL, **Venkitaraman AR**. Nat Commun. 2023 Mar 28;14(1):1726. doi: 10.1038/s41467-023-37223-3. PMID: 36977662

[MDM2 inhibitors, nutlin-3a and navtemadelin, retain efficacy in human and mouse cancer cells cultured in hypoxia.](#)

Lerma Clavero A, Boqvist PL, Ingelshed K, Bosdotter C, Sedimbi S, Jiang L, Wermeling F, Vojtesek B, **Lane DP**, Kannan P. Sci Rep. 2023 Mar 20;13(1):4583. doi: 10.1038/s41598-023-31484-0. PMID: 36941277

[Visualizing intracellular target antigens in live cells.](#)

Ueda H, Dai Y, **Ghadessy F**. Trends Cell Biol. 2023 Apr;33(4):277-279. doi: 10.1016/j.tcb.2023.01.004. Epub 2023 Feb 7. PMID: 36759281

PREPRINT: [Design-Rules for Stapled Alpha-Helical Peptides with On-Target In Vivo Activity: Application to Mdm2/X dual antagonists.](#)

Chandramohan A, Josien H, Yuen TY, Duggal R, Spiegelberg D, Yan L, Juang YCA, Ge L, Aronica P, Kaan K, Lim YH, Peier A, Sherborne B, Hochman J, Lin S, Biswas K, Henry B, Nestor M, Verma CS, **Lane D**, Sawyer T, Garbaccio R, Kannan S, **Brown CJ**, Johannes CW, Partridge AW. bioRxiv. Posted February 26, 2023. doi: <https://doi.org/10.1101/2023.02.25.530030>

[Covalent Rescue of Mutant p53.](#)

Lane DP, Verma CS. Cancer Discov. 2023 Jan 9;13(1):14-16. doi: 10.1158/2159-8290.CD-22-1212. PMID: 36620883

[A "grappling hook" interaction connects self-assembly and chaperone activity of Nucleophosmin 1.](#)

Saluri M, Leppert A, Gese GV, Sahin C, Lama D, Kaldmäe M, Chen G, Elofsson A, Allison TM, Arsenian-Henriksson M, Johansson J, **Lane DP**, Hällberg BM, Landreh M. PNAS Nexus. 2023 Jan 6;2(2):pgac303. doi: 10.1093/pnasnexus/pgac303. eCollection 2023 Feb. PMID: 36743470

2022

[Conformation specific antagonistic high affinity antibodies to the RON receptor kinase for imaging and therapy.](#)

Koh XY, Koh XH, Spiegelberg D, Jha P, Nestor M, Hwang LA, Tan BX, **Lane DP**. Sci Rep. 2022 Dec 29;12(1):22564. doi: 10.1038/s41598-022-26404-7. PMID: 36581692

[Halogenation of Peptides and Proteins Using Engineered Tryptophan Halogenase Enzymes.](#)

Sana B, **Ke D**, Li EHY, Ho T, Seayad J, Duong HA, **Ghadessy FJ**. Biomolecules. 2022 Dec 8;12(12):1841. doi: 10.3390/biom12121841. PMID: 36551269

[Indole and azaindole halogenation catalyzed by the RebH enzyme variant 3-LSR utilizing co-purified E. coli reductase.](#)

Li EHY, Sana B, Ho T, **Ke D**, **Ghadessy FJ**, Duong HA, Seayad J. Front Bioeng Biotechnol. 2022 Dec 1;10:1032707. doi: 10.3389/fbioe.2022.1032707. eCollection 2022. PMID: 36588932

[Ras-mutant cancers are sensitive to small molecule inhibition of V-type ATPases in mice.](#)

Tolani B, Celli A, Yao Y, **Tan YZ**, Fetter R, Liem CR, de Smith AJ, Vasanthakumar T, Bisignano P, Cotton AD, Seiple IB, Rubinstein JL, Jost M, Weissman JS. Nat Biotechnol. 2022 Dec;40(12):1834-1844. doi: 10.1038/s41587-022-01386-z. Epub 2022 Jul 25. PMID: 35879364

[Binary combinatorial scanning reveals potent poly-alanine-substituted inhibitors of protein-protein interactions.](#)

Ye X, Lee YC, **Gates ZP**, Ling Y, Mortensen JC, Yang FS, Lin YS, Pentelute BL. Commun Chem. 2022 Oct 14;5(1):128. doi: 10.1038/s42004-022-00737-w. PMID: 36697672

[Structure of V-ATPase from citrus fruit.](#)

Tan YZ, Keon KA, Abdelaziz R, Imming P, Schulze W, Schumacher K, Rubinstein JL. Structure. 2022 Oct 6;30(10):1403-1410.e4. doi: 10.1016/j.str.2022.07.006. Epub 2022 Aug 29. PMID: 36041457

[Structure and Function of Mycobacterial Arabinofuranosyltransferases.](#)

Tan YZ, Mancía F. Subcell Biochem. 2022;99:379-391. doi: 10.1007/978-3-031-00793-4_12. PMID: 36151383

[A fragment-based approach leading to the discovery of inhibitors of CK2 \$\alpha\$ with a novel mechanism of action.](#)

Brear P, De Fusco C, Atkinson EL, Iegre J, Francis-Newton NJ, **Venkitaraman AR**, Hyvönen M, Spring DR. RSC Med Chem. 2022 Sep 16;13(11):1420-1426. doi: 10.1039/d2md00161f. eCollection 2022 Nov 16. PMID: 36426237

[The MDM2 Inhibitor Navtemadlin Arrests Mouse Melanoma Growth *In Vivo* and Potentiates Radiotherapy.](#)

Ingelshed K, Spiegelberg D, Kannan P, Pávénus L, Hacheney J, Jiang L, Eisinger S, Lianoudaki D, Lama D, Castillo F, Bosdotter C, Kretzschmar WW, Al-Radi O, Fritz N, Villablanca EJ, Karlsson MCI, Wermeling F, Nestor M, **Lane DP**, Sedimbi SK. Cancer Res Commun. 2022 Sep 28;2(9):1075-1088. doi: 10.1158/2767-9764.CRC-22-0053. eCollection 2022 Sep. PMID: 36922937

PREPRINT: [Stitched peptides as potential cell permeable inhibitors of oncogenic DAXX protein.](#)

Jelinska C, Kannan S, **Frosi Y**, **Ramlan SR**, Winnerdy F, Lakshminarayanan R, **Brown CJ**, Phan AT, Rhodes D, Verma C. bioRxiv, Sept 2022.

[Engineering an autonomous VH domain to modulate intracellular pathways and to interrogate the eIF4F complex.](#)

Frosi Y, Lin YC, Shimin J, **Ramlan SR**, Hew K, Engman AH, Pillai A, Yeung K, Cheng YX, Cornvik T, Nordlund P, Goh M, Lama D, **Gates ZP**, Verma CS, Thean D, **Lane DP**, Asial I, **Brown CJ**. Nat Commun. 2022 Aug 18;13(1):4854. doi: 10.1038/s41467-022-32463-1. PMID: 35982046

[Intra Q-body: an antibody-based fluorogenic probe for intracellular proteins that allows live cell imaging and sorting.](#)

Dai Y, Sato Y, Zhu B, Kitaguchi T, Kimura H, **Ghadessy FJ**, Ueda H. Chem Sci. 2022 Aug 1;13(33):9739-9748. doi: 10.1039/d2sc02355e. eCollection 2022 Aug 24. PMID: 36091915

[Development of a novel peptide aptamer that interacts with the eIF4E capped-mRNA binding site using peptide epitope linker evolution \(PELE\).](#)

Frosi Y, Ng S, Lin YC, Jiang S, **Ramlan SR**, Lama D, Verma CS, Asial I, **Brown CJ**. RSC Chem Biol. 2022 May 19;3(7):916-930. doi: 10.1039/d2cb00099g. eCollection 2022 Jul 6. PMID: 35866173

[CryoEM of endogenous mammalian V-ATPase interacting with the TLDc protein mEAK-7.](#)

Tan YZ, Abbas YM, Wu JZ, Wu D, Keon KA, Hesketh GG, Bueler SA, Gingras AC, Robinson CV, Grinstein S, Rubinstein JL. Life Sci Alliance. 2022 Jul 6;5(11):e202201527. doi: 10.26508/lsa.202201527. Print 2022 Nov. PMID: 35794005

[Better, Faster, Cheaper: Recent Advances in Cryo-Electron Microscopy.](#)

Chua EYD, Mendez JH, Rapp M, Ilca SL, **Tan YZ**, Maruthi K, Kuang H, Zimanyi CM, Cheng A, Eng ET, Noble AJ, Potter CS, Carragher B. Annu Rev Biochem. 2022 Jun 21;91:1-32. doi: 10.1146/annurev-biochem-032620-110705. Epub 2022 Mar 23. PMID: 35320683

[A "spindle and thread" mechanism unblocks p53 translation by modulating N-terminal disorder.](#)

Kaldmäe M, Vosselman T, Zhong X, Lama D, Chen G, Saluri M, Kronqvist N, **Siau JW**, Ng AS, **Ghadessy FJ**, Sabatier P, Vojtesek B, Sarr M, Sahin C, Österlund N, Ilag LL, Väänänen VA, Sedimbi S, Arsenian-Henriksson M, Zubarev RA, Nilsson L, Koeck PJB, Rising A, Abelein A, Fritz N, Johansson J, **Lane DP**, Landreh M. Structure. 2022 May 5;30(5):733-742.e7. doi: 10.1016/j.str.2022.02.013. Epub 2022 Mar 14. PMID: 35290795

[An Automated Quantification Tool for Angiogenic Sprouting From Endothelial Spheroids.](#)

Kannan P, Schain M, **Lane DP**. Front Pharmacol. 2022 Apr 27;13:883083. doi: 10.3389/fphar.2022.883083. eCollection 2022. PMID: 35571133

[CETSA interaction proteomics define specific RNA-modification pathways as key components of fluorouracil-based cancer drug cytotoxicity.](#)

Liang YY, Bacanu S, Sreekumar L, Ramos AD, Dai L, Michaelis M, Cinatl J, Seki T, Cao Y, Coffill CR, **Lane DP**, Prabhu N, Nordlund P. Cell Chem Biol. 2022 Apr 21;29(4):572-585.e8. doi: 10.1016/j.chembiol.2021.06.007. Epub 2021 Jul 16. PMID: 34265272

[Induction of APOBEC3-mediated genomic damage in urothelium implicates BK polyomavirus \(BKPyV\) as a hit-and-run driver for bladder cancer.](#)

Baker SC, Mason AS, Slip RG, Skinner KT, Macdonald A, Masood O, Harris RS, Fenton TR, **Periyasamy M**, Ali S, Southgate J. Oncogene. 2022 Apr;41(15):2139-2151. doi: 10.1038/s41388-022-02235-8. Epub 2022 Feb 22. PMID: 35194151

[The influences of substrates' physical properties on enzymatic PET hydrolysis: Implications for PET hydrolase engineering.](#)

Pasula RR, Lim S, **Ghadessy FJ**, Sana B. Eng Biol. 2022 Mar 24;6(1):17-22. doi: 10.1049/enb2.12018. eCollection 2022 Mar. PMID: 36968557

[Rapid recruitment of p53 to DNA damage sites directs DNA repair choice and integrity.](#)

Wang YH, **Ho TLF**, Hariharan A, Goh HC, Wong YL, Verkaik NS, Lee MY, Tam WL, van Gent DC, **Venkitaraman AR**, Sheetz MP, **Lane DP**. Proc Natl Acad Sci U S A. 2022 Mar 8;119(10):e2113233119. doi: 10.1073/pnas.2113233119. Epub 2022 Mar 2. PMID: 35235448

[Early Neutrophilia Marked by Aerobic Glycolysis Sustains Host Metabolism and Delays Cancer Cachexia.](#)

Petruzzelli M, Ferrer M, Schuijs MJ, Kleeman SO, Mourikis N, Hall Z, Perera D, Raghunathan S, Vacca M, Gaude E, Lukey MJ, Jodrell DI, Frezza C, Wagner EF, **Venkitaraman AR**, Halim TYF, Janowitz T. *Cancers (Basel)*. 2022 Feb 15;14(4):963. doi: 10.3390/cancers14040963. PMID: 35205709

[Molecular descriptors suggest stapling as a strategy for optimizing membrane permeability of cyclic peptides.](#)

Li J, Kannan S, Aronica P, **Brown CJ**, Partridge AW, Verma CS. *J Chem Phys*. 2022 Feb 14;156(6):065101. doi: 10.1063/5.0078025. PMID: 35168356

[Affinity Selection from Synthetic Peptide Libraries Enabled by De Novo MS/MS Sequencing](#)

Koh LQ, Lim YW, **Gates ZP**. 2022. *Int J Pept Res Ther* 28 (2), 1-14. doi: 10.1007/s10989-022-10370-9

[Phase-separating peptides for direct cytosolic delivery and redox-activated release of macromolecular therapeutics.](#)

Sun Y, Lau SY, Lim ZW, Chang SC, **Ghadessy F**, Partridge A, Miserez A. *Nat Chem*. 2022 Feb 3. doi: 10.1038/s41557-021-00854-4. Online ahead of print. PMID: 35115657

[CRISPR/Cas9-Induced DNA Damage Enriches for Mutations in a p53-Linked Interactome: Implications for CRISPR-Based Therapies.](#)

Jiang L, Ingelshed K, Shen Y, Boddul SV, Iyer VS, Kasza Z, Sedimbi S, **Lane DP**, Wermeling F. *Cancer Res*. 2022 Jan 1;82(1):36-45. doi: 10.1158/0008-5472.CAN-21-1692. Epub 2021 Nov 18. PMID: 34750099

2021

[Symmetric activation and modulation of the human calcium-sensing receptor.](#)

Park J, Zuo H, Frangaj A, Fu Z, Yen LY, Zhang Z, Mosyak L, Slavkovich VN, Liu J, Ray KM, Cao B, Vallese F, Geng Y, Chen S, Grassucci R, Dandey VP, **Tan YZ**, Eng E, Lee Y, Kloss B, Liu Z, Hendrickson WA, Potter CS, Carragher B, Graziano J, Conigrave AD, Frank J, Clarke OB, Fan QR. *Proc Natl Acad Sci U S A*. 2021 Dec 21;118(51):e2115849118. doi: 10.1073/pnas.2115849118. PMID: 34916296

PREPRINT: [Accelerated biological aging in people with Down syndrome with full and segmental trisomy 21 begins in childhood as revealed by immunoglobulin G glycosylation.](#)

Cindric A, Vuckovic F, **Koschut D**, Borelli V, Juric J, Pucic-Bakovic M, Slana A, Deris H, Frkatović A, Murray A, Alic I, Groet J, O'Brien N, Petrovic D, Hamburg S, Startin C, Hithersay R, D'Souza H, LonDownS Consortium, Spector T, Mitrecic D, Kero M, Odak L, Barisic I, Thomas M, Strydom A, Rebillat AS, Franceschi C, Lauc G, Kristic J, Nizetic D. *Research Square*, Posted 15 Dec 2021. DOI: 10.21203/rs.3.rs-1128079/v1

[Constitutive activation of WASp in X-linked neutropenia renders neutrophils hyperactive.](#)

Keszei M, Record J, Kritikou JS, Wurzer H, Geyer C, Thiemann M, Drescher P, Brauner H, Köcher L, James J, He M, Baptista MA, Dahlberg CI, Biswas A, Lain S, **Lane DP**, Song W, Pütsep K, Vandenberghe P, Snapper SB, Westerberg LS. *J Clin Invest*. 2021 Dec 1;131(23):e156513. doi: 10.1172/JCI156513. PMID: 34850746

[Discovery of cell active macrocyclic peptides with on-target inhibition of KRAS signaling.](#)

Lim S, Boyer N, Boo N, Huang C, Venkatachalam G, Angela Juang YC, Garrigou M, Kaan HYK, Duggal R, Peh KM, Sadruddin A, Gopal P, Yuen TY, Ng S, Kannan S, **Brown CJ**, Verma CS, Orth P, Peier A, Ge L, Yu X, Bhatt B, Chen F, Wang E, Li NJ, Gonzales RJ, Stoeck A, Henry B, Sawyer TK, **Lane DP**, Johannes CW, Biswas K, Partridge AW. Chem Sci. 2021 Nov 25;12(48):15975-15987. doi: 10.1039/d1sc05187c. eCollection 2021 Dec 15. PMID: 35024121

[Target identification for small-molecule discovery in the FOXO3a tumor-suppressor pathway using a biodiverse peptide library.](#)

Emery A, Hardwick BS, Crooks AT, Milech N, Watt PM, Mithra C, Kumar V, Giridharan S, Sadasivam G, Mathivanan S, Sudhakar S, Bairy S, Bharatham K, Hurakadli MA, Prasad TK, Kamariah N, Muellner M, Coelho M, Torrance CJ, McKenzie GJ, **Venkitaraman AR**. Cell Chem Biol. 2021 Nov 18;28(11):1602-1615.e9. doi: 10.1016/j.chembiol.2021.05.009. Epub 2021 Jun 9. PMID: 34111400

[p53-Mediated Radiosensitization of ¹⁷⁷Lu-DOTATATE in Neuroblastoma Tumor Spheroids.](#)

Lundsten S, Berglund H, Jha P, Krona C, Hariri M, Nelander S, **Lane DP**, Nestor M. Biomolecules. 2021 Nov 15;11(11):1695. doi: 10.3390/biom11111695. PMID: 34827693

[CD36 and LC3B initiated autophagy in B cells regulates the humoral immune response.](#)

He C, Wang S, Zhou C, He M, Wang J, Ladds M, Lianoudaki D, Sedimbi SK, **Lane DP**, Westerberg LS, Li S, Karlsson MCI. Autophagy. 2021 Nov;17(11):3577-3591. doi: 10.1080/15548627.2021.1885183. Epub 2021 Feb 16. PMID: 33535890

[Patient-specific Alzheimer-like pathology in trisomy 21 cerebral organoids reveals BACE2 as a gene dose-sensitive AD suppressor in human brain.](#)

Alić I, Goh PA, Murray A, Portelius E, Gkanatsiou E, Gough G, Mok KY, **Koschut D**, Brunmeir R, Yeap YJ, O'Brien NL, Groet J, Shao X, Havlicek S, Dunn NR, Kvartsberg H, Brinkmalm G, Hithersay R, Startin C, Hamburg S, Phillips M, Pervushin K, Turmaine M, Wallon D, Rovelet-Lecrux A, Soininen H, Volpi E, Martin JE, Foo JN, Becker DL, Rostagno A, Ghiso J, Krsnik Ž, Šimić G, Kostović I, Mitrečić D; LonDownS Consortium; Francis PT, Blennow K, Strydom A, Hardy J, Zetterberg H, Nižetić D. Mol Psychiatry. 2021 Oct;26(10):5766-5788. doi: 10.1038/s41380-020-0806-5. Epub 2020 Jul 10. PMID: 32647257

[A general approach to protein folding using thermostable exoshells.](#)

Sadeghi S, Deshpande S, Vallerinteavide Mavelli G, Aksoyoglu A, Bafna J, Winterhalter M, Kini RM, **Lane DP**, Drum CL. Nat Commun. 2021 Sep 29;12(1):5720. doi: 10.1038/s41467-021-25996-4. PMID: 34588451

[Engineered RebH Halogenase Variants Demonstrating a Specificity Switch from Tryptophan towards Novel Indole Compounds.](#)

Sana B, Ho T, Kannan S, **Ke D**, Li EHY, Seayad J, Verma CS, Duong HA, **Ghadessy FJ**. Chembiochem. 2021 Sep 14;22(18):2791-2798. doi: 10.1002/cbic.202100210. Epub 2021 Jul 29. PMID: 34240527

[Monoclonal Antibodies against Specific p53 Hotspot Mutants as Potential Tools for Precision Medicine.](#)

Hwang LA, Phang BH, Liew OW, Iqbal J, Koh XH, Koh XY, Othman R, Xue Y, Richards AM, **Lane DP**, Sabapathy K. Cell Rep. 2021 Aug 10;36(6):109498. doi: 10.1016/j.celrep.2021.109498. PMID: 34380044

[BRCA2 deficiency reveals that oxidative stress impairs RNaseH1 function to cripple mitochondrial DNA maintenance.](#)

Renaudin X, Lee M, Shehata M, Surmann EM, **Venkitaraman AR**. Cell Rep. 2021 Aug 3;36(5):109478. doi: 10.1016/j.celrep.2021.109478. PMID: 34348152

[Can Glycosylation Mask the Detection of MHC Expressing p53 Peptides by T Cell Receptors?](#)

Nguyen TB, **Lane DP**, Verma CS. Biomolecules. 2021 Jul 19;11(7):1056. doi: 10.3390/biom11071056. PMID: 34356680

[Multivalency transforms SARS-CoV-2 antibodies into ultrapotent neutralizers.](#)

Rujas E, Kucharska I, **Tan YZ**, Benlekbir S, Cui H, Zhao T, Wasney GA, Budyłowski P, Guvenc F, Newton JC, Sicard T, Semesi A, Muthuraman K, Nouanesengsy A, Aschner CB, Prieto K, Bueler SA, Youssef S, Liao-Chan S, Glanville J, Christie-Holmes N, Mubareka S, Gray-Owen SD, Rubinstein JL, Treanor B, Julien JP. Nat Commun. 2021 Jun 16;12(1):3661. doi: 10.1038/s41467-021-23825-2. PMID: 34135340

[Cancer Cells Shuttle Extracellular Vesicles Containing Oncogenic Mutant p53 Proteins to the Tumor Microenvironment.](#)

Bhatta B, Luz I, Krueger C, Teo FX, **Lane DP**, Sabapathy K, Cooks T. Cancers (Basel). 2021 Jun 15;13(12):2985. doi: 10.3390/cancers13122985. PMID: 34203762

[Cancer-causing BRCA2 missense mutations disrupt an intracellular protein assembly mechanism to disable genome maintenance.](#)

Lee M, Shorthouse D, Mahen R, Hall BA, **Venkitaraman AR**. Nucleic Acids Res. 2021 Jun 4;49(10):5588-5604. doi: 10.1093/nar/gkab308. PMID: 33978741

[A small-molecule inhibitor of the BRCA2-RAD51 interaction modulates RAD51 assembly and potentiates DNA damage-induced cell death.](#)

Scott DE, Francis-Newton NJ, Marsh ME, Coyne AG, Fischer G, Moschetti T, Bayly AR, Sharpe TD, Haas KT, Barber L, Valenzano CR, Srinivasan R, Huggins DJ, Lee M, Emery A, Hardwick B, Ehebauer M, Dagostin C, Esposito A, Pellegrini L, Perrior T, McKenzie G, Blundell TL, Hyvönen M, Skidmore J, **Venkitaraman AR**, Abell C. Cell Chem Biol. 2021 Jun 17;28(6):835-847.e5. doi: 10.1016/j.chembiol.2021.02.006. Epub 2021 Mar 3. PMID: 33662256

[Functional display of bioactive peptides on the vGFP scaffold.](#)

Chee SMQ, Wongsantichon J, Yi LS, Sana B, **Frosi Y**, Robinson RC, **Ghadessy FJ**. Sci Rep. 2021 May 12;11(1):10127. doi: 10.1038/s41598-021-89421-y. PMID: 33980885

[Liposome Click Membrane Permeability Assay for Identifying Permeable Peptides.](#)

Desai TJ, Habulihaz B, Cannon JR, Chandramohan A, Kaan HYK, Sadruddin A, Yuen TY, Johannes C, Thean D, **Brown CJ**, **Lane DP**, Partridge AW, Evers R, Sawyer TK, Hochman J. Pharm Res. 2021 May;38(5):843-850. doi: 10.1007/s11095-021-03005-z. Epub 2021 Mar 15. PMID: 33723794

[Correction to: Liposome Click Membrane Permeability Assay for Identifying Permeable Peptides.](#)

Desai TJ, Habulihaz B, Cannon JR, Chandramohan A, Kaan HYK, Sadruddin A, Yuen TY, Johannes C, Thean D, **Brown CJ**, **Lane DP**, Partridge AW, Evers R, Sawyer TK, Hochman J. Pharm Res. 2021 Apr;38(4):735-736. doi: 10.1007/s11095-021-03033-9. PMID: 33821425

[Tissues and Tumor Microenvironment \(TME\) in 3D: Models to Shed Light on Immunosuppression in Cancer.](#)

Ho T, Msallam R. *Cells*. 2021 Apr 7;10(4):831. doi: 10.3390/cells10040831. PMID: 33917037

[High Throughput Expression Screening of Arabinofuranosyltransferases from Mycobacteria.](#)

Rodrigues, J., Almeida, V.T., Rosário, A.L., **Tan, Y.Z.**, Kloss, B., Mancia, F. and Archer, M., 2021. *Processes*, 9(4), p.629.

[Constitutive activation of WASp leads to abnormal cytotoxic cells with increased granzyme B and degranulation response to target cells.](#)

Kritikou JS, Oliveira MM, Record J, Saeed MB, Nigam SM, He M, Keszei M, Wagner AK, Brauner H, Sendel A, Sedimbi SK, Rentouli S, **Lane DP**, Snapper SB, Kärre K, Vandenberghe P, Orange JS, Westerberg LS. *JCI Insight*. 2021 Mar 22;6(6):e140273. doi: 10.1172/jci.insight.140273. PMID: 33621210

[CD36 and LC3B initiated autophagy in B cells regulates the humoral immune response.](#)

He C, Wang S, Zhou C, He M, Wang J, Ladds M, Lianoudaki D, Sedimbi SK, **Lane DP**, Westerberg LS, Li S, Karlsson MCI. *Autophagy*. 2021 Feb 16:1-15. doi: 10.1080/15548627.2021.1885183. Online ahead of print. PMID: 33535890

[Identification of pathways modulating vemurafenib resistance in melanoma cells via a genome-wide CRISPR/Cas9 screen.](#)

Goh CJH, Wong JH, El Farran C, Tan BX, Coffill CR, Loh YH, **Lane D**, Arumugam P. *G3 (Bethesda)*. 2021 Feb 9;11(2):jkaa069. doi: 10.1093/g3journal/jkaa069. PMID: 33604667

[NanoClick: A High Throughput, Target-Agnostic Peptide Cell Permeability Assay.](#)

Peier A, Ge L, Boyer N, Frost J, Duggal R, Biswas K, Edmondson S, Hermes JD, Yan L, Zimprich C, Sadruddin A, Kristal Kaan HY, Chandramohan A, **Brown CJ**, Thean D, Lee XE, Yuen TY, Ferrer-Gago FJ, Johannes CW, **Lane DP**, Sherborne B, Corona C, Robers MB, Sawyer TK, Partridge AW. *ACS Chem Biol*. 2021 Feb 19;16(2):293-309. doi: 10.1021/acscchembio.0c00804. Epub 2021 Feb 4. PMID: 33539064

[Induction of APOBEC3B expression by chemotherapy drugs is mediated by DNA-PK-directed activation of NF-κB.](#)

Periyasamy M, Singh AK, Gemma C, Farzan R, Allsopp RC, Shaw JA, Charmsaz S, Young LS, Cunnea P, Coombes RC, Gyórfy B, Buluwela L, Ali S. *Oncogene*. 2021 Feb;40(6):1077-1090. doi: 10.1038/s41388-020-01583-7. Epub 2020 Dec 15. PMID: 33323971

[Conformational ordering of intrinsically disordered peptides for targeting translation initiation.](#)

Brown CJ, Verma CS, **Lane DP**, Lama D. *Biochim Biophys Acta Gen Subj*. 2021 Jan;1865(1):129775. doi: 10.1016/j.bbagen.2020.129775. Epub 2020 Oct 27. PMID: 33122085

[RAS-protein activation but not mutation status is an outcome predictor and unifying therapeutic target for high-risk acute lymphoblastic leukemia.](#)

Koschut D, Ray D, Li Z, Giarin E, Groet J, Alić I, Kham SK, Chng WJ, Ariffin H, Weinstock DM, Yeoh AE, Basso G, Nižetić D. *Oncogene*. 2021 Jan;40(4):746-762. doi: 10.1038/s41388-020-01567-7. Epub 2020 Nov 27. PMID: 33247204

2020

[Exploitation of dihydroorotate dehydrogenase \(DHODH\) and p53 activation as therapeutic targets: A case study in polypharmacology.](#)

Ladds MJGW, Popova G, Pastor-Fernández A, Kannan S, van Leeuwen IMM, Håkansson M, Walse B, Tholander F, Bhatia R, Verma CS, **Lane DP**, Laín S. *J Biol Chem.* 2020 Dec 25;295(52):17935-17949. doi: 10.1074/jbc.RA119.012056. Epub 2020 Sep 8. PMID: 32900849

[Seeing Atoms: Single-Particle Cryo-EM Breaks the Atomic Barrier.](#)

Tan YZ, Carragher B. *Mol Cell.* 2020 Dec 17;80(6):938-939. doi: 10.1016/j.molcel.2020.11.043. PMID: 33338409

[Directed co-evolution of interacting protein-peptide pairs by compartmentalized two-hybrid replication \(C2HR\).](#)

Siau JW, Nonis S, **Chee S**, Koh LQ, Ferrer FJ, **Brown CJ**, **Ghadessy FJ**. *Nucleic Acids Res.* 2020 Dec 16;48(22):e128. doi: 10.1093/nar/gkaa933. PMID: 33104786

PREPRINT: [VGLL1-directed TEAD activation drives endocrine therapy resistance in estrogen receptor positive breast cancer.](#)

Gemma C, Singh AK, Belfiore A, Lai CF, **Periyasamy M**, Abuelmaaty S, Davies CM, Wang X, Simmons GM, Nguyen VTM, Magnani L, Rakha E, Martin LA, Coombes RC, Pruneri G, Buluwela L, Ali S. *bioRxiv.* Posted November 29, 2020. doi: <https://doi.org/10.1101/2020.11.29.402842>.

[Discovery of Nucleic Acid Binding Molecules from Combinatorial Biohybrid Nucleobase Peptide Libraries.](#)

Pomplun S, **Gates ZP**, Zhang G, Quartararo AJ, Pentelute BL. *J Am Chem Soc.* 2020 Nov 18;142(46):19642-19651. doi: 10.1021/jacs.0c08964. Epub 2020 Nov 9. PMID: 33166454

[Through-grid wicking enables high-speed cryoEM specimen preparation.](#)

Tan YZ, Rubinstein JL. *Acta Crystallogr D Struct Biol.* 2020 Nov 1;76(Pt 11):1092-1103. doi: 10.1107/S2059798320012474. Epub 2020 Oct 13. PMID: 33135680

[Flow-based SPSS for protein synthesis: A perspective](#)

Gates ZP, Hartrampf N. 06 Oct 2020, *Pept Sci.* 112(6):e24198. doi.org/10.1002/pep2.24198

[The Novel Anti-cMet Antibody seeMet 12 Potentiates Sorafenib Therapy and Radiotherapy in a Colorectal Cancer Model.](#)

Spiegelberg D, Mortensen ACL, Palupi KD, Micke P, Wong J, Vojtesek B, **Lane DP**, Nestor M. *Front Oncol.* 2020 Sep 11;10:1717. doi: 10.3389/fonc.2020.01717. eCollection 2020. PMID: 33014851

[A kinase-independent function for AURORA-A in replisome assembly during DNA replication initiation.](#)

Guarino Almeida E, Renaudin X, **Venkitaraman AR**. *Nucleic Acids Res.* 2020 Aug 20;48(14):7844-7855. doi: 10.1093/nar/gkaa570. PMID: 32652013

[Electron-event representation data enable efficient cryoEM file storage with full preservation of spatial and temporal resolution.](#)

Guo H, Franken E, Deng Y, Benlekbir S, Singla Lezcano G, Janssen B, Yu L, Ripstein ZA, **Tan YZ**, Rubinstein JL. *IUCr*. 2020 Aug 7;7(Pt 5):860-869. doi: 10.1107/S205225252000929X. eCollection 2020 Sep 1. PMID: 32939278

[A Patient-Derived Cell Atlas Informs Precision Targeting of Glioblastoma.](#)

Johansson P, Krona C, Kundu S, Doroszko M, Baskaran S, Schmidt L, Vinel C, Almstedt E, Elgendy R, Elfineh L, Gallant C, Lundsten S, Ferrer Gago FJ, Hakkarainen A, Sipilä P, Häggblad M, Martens U, Lundgren B, Frigault MM, **Lane DP**, Swartling FJ, Uhrbom L, Nestor M, Marino S, Nelander S. *Cell Rep*. 2020 Jul 14;32(2):107897. doi: 10.1016/j.celrep.2020.107897. PMID: 32668248

[Cryo-EM structure of arabinosyltransferase EmbB from *Mycobacterium smegmatis*.](#)

Tan YZ, Rodrigues J, Keener JE, Zheng RB, Brunton R, Kloss B, Giacometti SI, Rosário AL, Zhang L, Niederweis M, Clarke OB, Lowary TL, Marty MT, Archer M, Potter CS, Carragher B, Mancia F. *Nat Commun*. 2020 Jul 7;11(1):3396. doi: 10.1038/s41467-020-17202-8. PMID: 32636380

[High intracellular stability of the spidroin N-terminal domain in spite of abundant amyloidogenic segments revealed by in-cell hydrogen/deuterium exchange mass spectrometry.](#)

Kaldmäe M, Leppert A, Chen G, Sarr M, Sahin C, Nordling K, Kronqvist N, Gonzalvo-Ulla M, Fritz N, Abelein A, Laín S, Biverstål H, Jörnvall H, **Lane DP**, Rising A, Johansson J, Landreh M. *FEBS J*. 2020 Jul;287(13):2823-2833. doi: 10.1111/febs.15169. Epub 2019 Dec 20. PMID: 31815338

[Ultra-large chemical libraries for the discovery of high-affinity peptide binders.](#)

Quartararo AJ, **Gates ZP**, Somsen BA, Hartrampf N, Ye X, Shimada A, Kajihara Y, Ottmann C, Pentelute BL. *Nat Commun*. 2020 Jun 23;11(1):3183. doi: 10.1038/s41467-020-16920-3. PMID: 32576815

[Cryo-EM Structures and Regulation of Arabinofuranosyltransferase AftD from *Mycobacteria*.](#)

Tan YZ, Zhang L, Rodrigues J, Zheng RB, Giacometti SI, Rosário AL, Kloss B, Dandey VP, Wei H, Brunton R, Raczkowski AM, Athayde D, Catalão MJ, Pimentel M, Clarke OB, Lowary TL, Archer M, Niederweis M, Potter CS, Carragher B, Mancia F. *Mol Cell*. 2020 May 21;78(4):683-699.e11. doi: 10.1016/j.molcel.2020.04.014. Epub 2020 May 7. PMID: 32386575

[Macrocyclization of an all-d linear \$\alpha\$ -helical peptide imparts cellular permeability.](#)

Kannan S, Aronica PGA, Ng S, Gek Lian DT, **Frosi Y**, **Chee S**, Shimin J, Yuen TY, Sadruddin A, Kaan HYK, Chandramohan A, Wong JH, Tan YS, Chang ZW, Ferrer-Gago FJ, Arumugam P, Han Y, Chen S, Rénia L, **Brown CJ**, Johannes CW, Henry B, **Lane DP**, Sawyer TK, Verma CS, Partridge AW. *Chem Sci*. 2020 May 11;11(21):5577-5591. doi: 10.1039/c9sc06383h. eCollection 2020 Jun 7. PMID: 32874502

[Synthesis of proteins by automated flow chemistry.](#)

Hartrampf N, Saebi A, Poskus M, **Gates ZP**, Callahan AJ, Cowfer AE, Hanna S, Antilla S, Schissel CK, Quartararo AJ, Ye X, Mijalis AJ, Simon MD, Loas A, Liu S, Jessen C, Nielsen TE, Pentelute BL. *Science*. 2020 May 29;368(6494):980-987. doi: 10.1126/science.abb2491. PMID: 32467387

[Combining native and 'omics' mass spectrometry to identify endogenous ligands bound to membrane proteins.](#)

Gault J, Liko I, Landreh M, Shutin D, Bolla JR, Jefferies D, Agasid M, Yen HY, Ladds MJGW, **Lane DP**, Khalid S, Mullen C, Remes PM, Huguet R, McAlister G, Goodwin M, Viner R, Syka JEP, Robinson CV.

Nat Methods. 2020 May;17(5):505-508. doi: 10.1038/s41592-020-0821-0. Epub 2020 May 4. PMID: 32371966

[Endonuclease FEN1 Coregulates ER \$\alpha\$ Activity and Provides a Novel Drug Interface in Tamoxifen-Resistant Breast Cancer.](#)

Flach KD, **Periyasamy M**, Jadhav A, Dorjsuren D, Siefert JC, Hickey TE, Opdam M, Patel H, Canisius S, Wilson DM 3rd, Donaldson Collier M, Prekovic S, Nieuwland M, Kluin RJC, Zakharov AV, Wesseling J, Wessels LFA, Linn SC, Tilley WD, Simeonov A, Ali S, Zwart W. Cancer Res. 2020 May 15;80(10):1914-1926. doi: 10.1158/0008-5472.CAN-19-2207. Epub 2020 Mar 19. PMID: 32193286

[Monitoring eIF4F Assembly by Measuring eIF4E-eIF4G Interaction in Live Cells.](#)

Frosi Y, Ramlan SR, Brown CJ. J Vis Exp. 2020 May 1;(159). doi: 10.3791/60850. PMID: 32421011

[De-risking Drug Discovery of Intracellular Targeting Peptides: Screening Strategies to Eliminate False-Positive Hits.](#)

Ng S, Juang YC, Chandramohan A, Kaan HYK, Sadruddin A, Yuen TY, Ferrer-Gago FJ, Lee XC, Liew X, Johannes CW, **Brown CJ**, Kannan S, Aronica PG, Berglund NA, Verma CS, Liu L, Stoeck A, Sawyer TK, Partridge AW, **Lane DP.** ACS Med Chem Lett. 2020 May 1;11(10):1993-2001. doi: 10.1021/acsmchemlett.0c00022. eCollection 2020 Oct 8. PMID: 33062184

[Targeting codon 158 p53-mutant cancers via the induction of p53 acetylation.](#)

Kong LR, Ong RW, Tan TZ, Mohamed Salleh NAB, Thangavelu M, Chan JV, Koh LYJ, Periyasamy G, Lau JA, Le TBU, Wang L, Lee M, Kannan S, Verma CS, Lim CM, Chng WJ, **Lane DP, Venkitaraman A,** Hung HT, Cheok CF, Goh BC. Nat Commun. 2020 Apr 29;11(1):2086. doi: 10.1038/s41467-020-15608-y. PMID: 32350249

[Combined proinflammatory cytokine and cognate activation of invariant natural killer T cells enhances anti-DNA antibody responses.](#)

Sedimbi SK, Hägglöf T, Garimella MG, Wang S, Duhlin A, Coelho A, Ingelshed K, Mondoc E, Malin SG, Holmdahl R, **Lane DP,** Leadbetter EA, Karlsson MCI. Proc Natl Acad Sci U S A. 2020 Apr 21;117(16):9054-9063. doi: 10.1073/pnas.1920463117. Epub 2020 Apr 15. PMID: 32295878

[Tumor-Targeted Delivery of the p53-Activating Peptide VIP116 with PEG-Stabilized Lipodisks.](#)

Lundsten S, Hernández VA, Gedda L, Sarén T, **Brown CJ, Lane DP,** Edwards K, Nestor M. Nanomaterials (Basel). 2020 Apr 19;10(4):783. doi: 10.3390/nano10040783. PMID: 32325827

[Enhancing the therapeutic effects of in vitro targeted radionuclide therapy of 3D multicellular tumor spheroids using the novel stapled MDM2/X-p53 antagonist PM2.](#)

Mortensen ACL, Morin E, **Brown CJ, Lane DP,** Nestor M. EJNMMI Res. 2020 Apr 16;10(1):38. doi: 10.1186/s13550-020-0613-7. PMID: 32300907

[bioPROTACs as versatile modulators of intracellular therapeutic targets including proliferating cell nuclear antigen \(PCNA\).](#)

Lim S, Khoo R, Peh KM, Teo J, Chang SC, Ng S, Beilhardt GL, Melnyk RA, Johannes CW, **Brown CJ, Lane DP,** Henry B, Partridge AW. Proc Natl Acad Sci U S A. 2020 Mar 17;117(11):5791-5800. doi: 10.1073/pnas.1920251117. Epub 2020 Mar 2. PMID: 32123106

[A Mass-Spectrometry-Based Approach to Distinguish Annular and Specific Lipid Binding to Membrane Proteins.](#)

Bolla JR, Corey RA, Sahin C, Gault J, Hummer A, Hopper JTS, **Lane DP**, Drew D, Allison TM, Stansfeld PJ, Robinson CV, Landreh M. Angew Chem Int Ed Engl. 2020 Feb 24;59(9):3523-3528. doi: 10.1002/anie.201914411. Epub 2020 Jan 29. PMID: 31886601

[Pulsatile MAPK Signaling Modulates p53 Activity to Control Cell Fate Decisions at the G2 Checkpoint for DNA Damage.](#)

De S, Campbell C, **Venkitaraman AR**, Esposito A. Cell Rep. 2020 Feb 18;30(7):2083-2093.e5. doi: 10.1016/j.celrep.2020.01.074. PMID: 32075732

[Synthesis of Chiral Alkenyl Cyclopropane Amino Acids for Incorporation into Stapled Peptides.](#)

Yuen TY, **Brown CJ**, Tan YS, Johannes CW. J Org Chem. 2020 Feb 7;85(3):1556-1566. doi: 10.1021/acs.joc.9b02659. Epub 2019 Dec 26. PMID: 31825612

[Functionalized Resins for the Synthesis of Peptide Alcohols.](#)

Ferrer-Gago FJ, Koh LQ, **Lane DP**. Chemistry. 2020 Jan 7;26(2):379-383. doi: 10.1002/chem.201903965. Epub 2019 Nov 19. PMID: 31609031

[ZNF281 is recruited on DNA breaks to facilitate DNA repair by non-homologous end joining.](#)

Nicolai S, Mahen R, Raschella G, Marini A, Pieraccioli M, Malewicz M, **Venkitaraman AR**, Melino G. Oncogene. 2020 Jan;39(4):754-766. doi: 10.1038/s41388-019-1028-7. Epub 2019 Sep 30. PMID: 31570788

[The quantification of antibody elements and receptors subunit expression using qPCR: The design of VH, VL, CH, CL, FcR subunits primers for a more holistic view of the immune system.](#)

Ling WL, Ng YL, Wipat A, **Lane DP**, Gan SK. J Immunol Methods. 2020 Jan;476:112683. doi: 10.1016/j.jim.2019.112683. Epub 2019 Nov 1. PMID: 31682797

[Development of a Novel Cell-Permeable Protein-Protein Interaction Inhibitor for the Polo-box Domain of Polo-like Kinase 1.](#)

Huggins DJ, Hardwick BS, Sharma P, Emery A, Laraia L, Zhang F, Narvaez AJ, Roberts-Thomson M, Crooks AT, Boyle RG, Boyce R, Walker DW, Mateu N, McKenzie GJ, Spring DR, **Venkitaraman AR**. ACS Omega. 2019 Dec 24;5(1):822-831. doi: 10.1021/acsomega.9b03626. eCollection 2020 Jan 14. PMID: 31956833

[FACT caught in the act of manipulating the nucleosome.](#)

Liu Y, Zhou K, Zhang N, Wei H, **Tan YZ**, Zhang Z, Carragher B, Potter CS, D'Arcy S, Luger K. Nature. 2020 Jan;577(7790):426-431. doi: 10.1038/s41586-019-1820-0. Epub 2019 Nov 27. PMID: 31775157

2019

[How the Other Half Lives: What p53 Does When It Is Not Being a Transcription Factor.](#)

Ho T, Tan BX, **Lane D**. Int J Mol Sci. 2019 Dec 18;21(1):13. doi: 10.3390/ijms21010013. PMID: 31861395

[Rigorous Computational and Experimental Investigations on MDM2/MDMX-Targeted Linear and Macrocyclic Peptides.](#)

Diller DJ, Swanson J, Bayden AS, **Brown CJ**, Thean D, **Lane DP**, Partridge AW, Sawyer TK, Audie J. *Molecules*. 2019 Dec 14;24(24):4586. doi: 10.3390/molecules24244586. PMID: 31847417

[Structure and drug resistance of the Plasmodium falciparum transporter PfCRT.](#)

Kim J, **Tan YZ**, Wicht KJ, Erramilli SK, Dhingra SK, Okombo J, Vendome J, Hagenah LM, Giacometti SI, Warren AL, Nosol K, Roepe PD, Potter CS, Carragher B, Kosiakoff AA, Quick M, Fidock DA, Mancina F. *Nature*. 2019 Dec;576(7786):315-320. doi: 10.1038/s41586-019-1795-x. Epub 2019 Nov 27. PMID: 31776516

[Structure of an endosomal signaling GPCR-G protein- \$\beta\$ -arrestin megacomplex.](#)

Nguyen AH, Thomsen ARB, Cahill TJ 3rd, Huang R, Huang LY, Marcink T, Clarke OB, Heissel S, Masoudi A, Ben-Hail D, Samaan F, Dandey VP, **Tan YZ**, Hong C, Mahoney JP, Triest S, Little J 4th, Chen X, Sunahara R, Steyaert J, Molina H, Yu Z, des Georges A, Lefkowitz RJ. *Nat Struct Mol Biol*. 2019 Dec;26(12):1123-1131. doi: 10.1038/s41594-019-0330-y. Epub 2019 Nov 18. PMID: 31740855

[Transmembrane signaling on a protocell: Creation of receptor-enzyme chimeras for immunodetection of specific antibodies and antigens.](#)

Su J, Kitaguchi T, Ohmuro-Matsuyama Y, Seah T, **Ghadessy FJ**, Hoon S, Ueda H. *Sci Rep*. 2019 Dec 3;9(1):18189. doi: 10.1038/s41598-019-54539-7. PMID: 31796769

[Simultaneous measurement of p53:Mdm2 and p53:Mdm4 protein-protein interactions in whole cells using fluorescence labelled foci.](#)

Frosi Y, Inoue K, **Ramlan SR**, **Lane DP**, Watanabe T, **Brown CJ**. *Sci Rep*. 2019 Nov 29;9(1):17933. doi: 10.1038/s41598-019-54123-z. PMID: 31784573

[The Dual Interactions of p53 with MDM2 and p300: Implications for the Design of MDM2 Inhibitors.](#)

Kannan S, Partridge AW, **Lane DP**, Verma CS. *Int J Mol Sci*. 2019 Nov 28;20(23):5996. doi: 10.3390/ijms20235996. PMID: 31795143

[Intratumour heterogeneity of p53 expression; causes and consequences.](#)

Xue Y, San Luis B, **Lane DP**. *J Pathol*. 2019 Nov;249(3):274-285. doi: 10.1002/path.5328. Epub 2019 Aug 27. PMID: 31322742

[Therapeutic anti-cancer activity of antibodies targeting sulfhydryl bond constrained epitopes on unglycosylated RON receptor tyrosine kinase.](#)

Koh XY, Koh XH, Hwang LA, Ferrer FJ, Rahmat SAB, Lama D, **Lane DP**. *Oncogene*. 2019 Nov;38(48):7342-7356. doi: 10.1038/s41388-019-0946-8. Epub 2019 Aug 15. PMID: 31417186

[A cryptic hydrophobic pocket in the polo-box domain of the polo-like kinase PLK1 regulates substrate recognition and mitotic chromosome segregation.](#)

Sharma P, Mahen R, Rossmann M, Stokes JE, Hardwick B, Huggins DJ, Emery A, Kunciw DL, Hyvönen M, Spring DR, McKenzie GJ, **Venkitaraman AR**. *Sci Rep*. 2019 Nov 4;9(1):15930. doi: 10.1038/s41598-019-50702-2. PMID: 31685831

[A systems view of spliceosomal assembly and branchpoints with iCLIP.](#)

Briese M, Haberman N, Sibley CR, Faraway R, Elser AS, Chakrabarti AM, Wang Z, König J, Perera D, Wickramasinghe VO, **Venkitaraman AR**, Luscombe NM, Saieva L, Pellizzoni L, Smith CWJ, Curk T, Ule J. *Nat Struct Mol Biol.* 2019 Oct;26(10):930-940. doi: 10.1038/s41594-019-0300-4. Epub 2019 Sep 30. PMID: 31570875

[Author Correction: A systems view of spliceosomal assembly and branchpoints with iCLIP.](#)

Briese M, Haberman N, Sibley CR, Faraway R, Elser AS, Chakrabarti AM, Wang Z, König J, Perera D, Wickramasinghe VO, **Venkitaraman AR**, Luscombe NM, Saieva L, Pellizzoni L, Smith CWJ, Curk T, Ule J. *Nat Struct Mol Biol.* 2020 Aug;27(8):768. doi: 10.1038/s41594-020-0470-0. PMID: 32641771

[The Stapled Peptide PM2 Stabilizes p53 Levels and Radiosensitizes Wild-Type p53 Cancer Cells.](#)

Mortensen ACL, Spiegelberg D, **Brown CJ**, **Lane DP**, Nestor M. *Front Oncol.* 2019 Sep 19;9:923. doi: 10.3389/fonc.2019.00923. eCollection 2019. PMID: 31616635

[Structure-Guided Synthesis and Evaluation of Small-Molecule Inhibitors Targeting Protein-Protein Interactions of BRCA1 tBRCT Domain.](#)

Kurdekar V, Giridharan S, Subbarao J, Nijaguna MB, Periasamy J, Boggaram S, Shivange AV, Sadasivam G, Padigaru M, Potluri V, **Venkitaraman AR**, Bharatham K. *ChemMedChem.* 2019 Sep 18;14(18):1620-1632. doi: 10.1002/cmdc.201900300. Epub 2019 Sep 9. PMID: 31334915

[How do mutations affecting the breast cancer genes BRCA1 and BRCA2 cause cancer susceptibility?](#)

Venkitaraman AR. *DNA Repair (Amst).* 2019 Sep;81:102668. doi: 10.1016/j.dnarep.2019.102668. Epub 2019 Jul 8. PMID: 31337537 Review.

[Fast single-cell biochemistry: theory, open source microscopy and applications.](#)

Trinh AL, Ber S, Howitt A, Valls PO, Fries MW, **Venkitaraman AR**, Esposito A. *Methods Appl Fluoresc.* 2019 Aug 29;7(4):044001. doi: 10.1088/2050-6120/ab3bd2. PMID: 31422954

[Development and application of a transcriptional sensor for detection of heterologous acrylic acid production in E. coli.](#)

Raghavan SS, **Chee S**, Li J, Poschmann J, Nagarajan N, **Jia Wei S**, Verma CS, **Ghadessy FJ.** *Microb Cell Fact.* 2019 Aug 19;18(1):139. doi: 10.1186/s12934-019-1185-y. PMID: 31426802

[How to lose tumor suppression.](#)

Lane DP. *Science.* 2019 Aug 9;365(6453):539-540. doi: 10.1126/science.aay4319. PMID: 31395768

[The MmpL3 interactome reveals a complex crosstalk between cell envelope biosynthesis and cell elongation and division in mycobacteria.](#)

Belardinelli JM, Stevens CM, Li W, **Tan YZ**, Jones V, Mancina F, Zgurskaya HI, Jackson M. *Sci Rep.* 2019 Jul 24;9(1):10728. doi: 10.1038/s41598-019-47159-8. PMID: 31341202

[Characterization of Hydration Properties in Structural Ensembles of Biomolecules.](#)

Pradhan MR, Nguyen MN, Kannan S, Fox SJ, Kwok CK, **Lane DP**, Verma CS. *J Chem Inf Model.* 2019 Jul 22;59(7):3316-3329. doi: 10.1021/acs.jcim.8b00453. Epub 2019 Jun 17. PMID: 31140800

[Bortezomib Stabilizes and Activates p53 in Proliferative Compartments of Both Normal and Tumor Tissues *In Vivo*.](#)

Xue Y, Barker N, Hoon S, He P, Thakur T, Abdeen SR, Maruthappan P, **Ghadessy FJ, Lane DP**. Cancer Res. 2019 Jul 15;79(14):3595-3607. doi: 10.1158/0008-5472.CAN-18-3744. Epub 2019 May 28. PMID: 31138526

[The structure of a 15-stranded actin-like filament from Clostridium botulinum.](#)

Koh F, Narita A, Lee LJ, Tanaka K, **Tan YZ**, Dandey VP, Popp D, Robinson RC. Nat Commun. 2019 Jun 28;10(1):2856. doi: 10.1038/s41467-019-10779-9. PMID: 31253774

[Incorporation of Putative Helix-Breaking Amino Acids in the Design of Novel Stapled Peptides: Exploring Biophysical and Cellular Permeability Properties.](#)

Partridge AW, Kaan HYK, Juang YC, Sadruddin A, Lim S, **Brown CJ**, Ng S, Thean D, Ferrer F, Johannes C, Yuen TY, Kannan S, Aronica P, Tan YS, Pradhan MR, Verma CS, Hochman J, Chen S, Wan H, Ha S, Sherborne B, **Lane DP**, Sawyer TK. Molecules. 2019 Jun 20;24(12):2292. doi: 10.3390/molecules24122292. PMID: 31226791

[Stereoisomerism of stapled peptide inhibitors of the p53-Mdm2 interaction: an assessment of synthetic strategies and activity profiles.](#)

Yuen TY, **Brown CJ**, Xue Y, Tan YS, Ferrer Gago FJ, Lee XE, Neo JY, Thean D, Kaan HYK, Partridge AW, Verma CS, **Lane DP**, Johannes CW. Chem Sci. 2019 May 30;10(26):6457-6466. doi: 10.1039/c9sc01456j. eCollection 2019 Jul 14. PMID: 31316744

[Monitoring flux in signalling pathways through measurements of 4EBP1-mediated eIF4F complex assembly.](#)

Frosi Y, Usher R, Lian DTG, **Lane DP, Brown CJ**. BMC Biol. 2019 May 22;17(1):40. doi: 10.1186/s12915-019-0658-0. PMID: 31118010

[Enhancing Biochemical Resolution by Hyperdimensional Imaging Microscopy.](#)

Esposito A, **Venkitaraman AR**. Biophys J. 2019 May 21;116(10):1815-1822. doi: 10.1016/j.bpj.2019.04.015. Epub 2019 Apr 22. PMID: 31060813

[In-solution enrichment identifies peptide inhibitors of protein-protein interactions.](#)

Touti F, **Gates ZP**, Bandyopadhyay A, Lautrette G, Pentelute BL. Nat Chem Biol. 2019 Apr;15(4):410-418. doi: 10.1038/s41589-019-0245-2. Epub 2019 Mar 18. PMID: 30886434

[Author Correction: In-solution enrichment identifies peptide inhibitors of protein-protein interactions.](#)

Touti F, **Gates ZP**, Bandyopadhyay A, Lautrette G, Pentelute BL. Nat Chem Biol. 2019 Jul;15(7):757. doi: 10.1038/s41589-019-0302-x. PMID: 31086332

[Development and structural characterization of an engineered multi-copper oxidase reporter of protein-protein interactions.](#)

Sana B, **Chee SMQ**, Wongsantichon J, Raghavan S, Robinson RC, **Ghadessy FJ**. J Biol Chem. 2019 Apr 26;294(17):7002-7012. doi: 10.1074/jbc.RA118.007141. Epub 2019 Feb 15. PMID: 30770473

[p53: updates on mechanisms, biology and therapy \(II\).](#)

Lane DP, Verma CS. J Mol Cell Biol. 2019 Apr 1;11(4):265-266. doi: 10.1093/jmcb/mjz018. PMID: 31222348

[Understanding p53 functions through p53 antibodies.](#)

Sabapathy K, **Lane DP**. J Mol Cell Biol. 2019 Apr 1;11(4):317-329. doi: 10.1093/jmcb/mjz010. PMID: 30907951

[Corrigendum to 'Understanding p53 functions through p53 antibodies'.](#)

Sabapathy K, **Lane DP**. J Mol Cell Biol. 2019 Dec 19;11(12):1105. doi: 10.1093/jmcb/mjz110. PMID: 31881082

[SHON expression predicts response and relapse risk of breast cancer patients after anthracycline-based combination chemotherapy or tamoxifen treatment.](#)

Abdel-Fatah TMA, Broom RJ, Lu J, Moseley PM, Huang B, Li L, Liu S, Chen L, Ma RZ, Cao W, Wang X, Li Y, Perry JK, Aleskandarany M, Nolan CC, Rakha EA, Lobie PE, Chan SYT, Ellis IO, Hwang LA, **Lane DP**, Green AR, Liu DX. Br J Cancer. 2019 Apr;120(7):728-745. doi: 10.1038/s41416-019-0405-x. Epub 2019 Feb 28. PMID: 30816325

[Inhibition of NLRP3 inflammasome activation by cell-permeable stapled peptides.](#)

Pal A, Neo K, Rajamani L, Ferrer FJ, **Lane DP**, Verma CS, Mortellaro A. Sci Rep. 2019 Mar 20;9(1):4913. doi: 10.1038/s41598-019-41211-3. PMID: 30894604

[Radiation-induced astrocyte senescence is rescued by \$\Delta\$ 133p53.](#)

Turnquist C, Beck JA, Horikawa I, Obiorah IE, Von Muhlinen N, Vojtesek B, **Lane DP**, Grunseich C, Chahine JJ, Ames HM, Smart DD, Harris BT, Harris CC. Neuro Oncol. 2019 Mar 18;21(4):474-485. doi: 10.1093/neuonc/noz001. PMID: 30615147

[Conformational Stabilization and Rapid Labeling of a 29-Residue Peptide by a Small Molecule Reaction Partner.](#)

Evans ED, **Gates ZP**, Sun ZJ, Mijalis AJ, Pentelute BL. Biochemistry. 2019 Mar 12;58(10):1343-1353. doi: 10.1021/acs.biochem.8b00940. Epub 2019 Feb 21. PMID: 30724554

[p53: updates on mechanisms, biology and therapy \(I\).](#)

Lane DP, Verma CS. J Mol Cell Biol. 2019 Mar 1;11(3):185-186. doi: 10.1093/jmcb/mjz017. PMID: 31222355

[Simulations of mutant p53 DNA binding domains reveal a novel druggable pocket.](#)

Pradhan MR, **Siau JW**, Kannan S, Nguyen MN, Ouaray Z, Kwoh CK, **Lane DP**, **Ghadessy F**, Verma CS. Nucleic Acids Res. 2019 Feb 28;47(4):1637-1652. doi: 10.1093/nar/gky1314. PMID: 30649466

[Structural insights reveal a recognition feature for tailoring hydrocarbon stapled-peptides against the eukaryotic translation initiation factor 4E protein.](#)

Lama D, Liberatore AM, **Frosi Y**, Nakhle J, Tsomaia N, Bashir T, **Lane DP**, **Brown CJ**, Verma CS, Auvin S. Chem Sci. 2019 Jan 7;10(8):2489-2500. doi: 10.1039/c8sc03759k. eCollection 2019 Feb 28. PMID: 30881679

2018

[BRCA2 controls DNA:RNA hybrid level at DSBs by mediating RNase H2 recruitment.](#)

D'Alessandro G, Whelan DR, Howard SM, Vitelli V, Renaudin X, Adamowicz M, Iannelli F, Jones-Weinert CW, Lee M, Matti V, Lee WTC, Morten MJ, **Venkitaraman AR**, Cejka P, Rothenberg E, d'Adda

di Fagagna F. Nat Commun. 2018 Dec 18;9(1):5376. doi: 10.1038/s41467-018-07799-2. PMID: 30560944

[Science in Focus: Genomic Instability and its Implications for Clinical Cancer Care.](#)

Ahmad SS, Ahmed K, **Venkitaraman AR**. Clin Oncol (R Coll Radiol). 2018 Dec;30(12):751-755. doi: 10.1016/j.clon.2018.09.001. Epub 2018 Sep 27. PMID: 30269933

[Reducing effects of particle adsorption to the air-water interface in cryo-EM.](#)

Noble AJ, Wei H, Dandey VP, Zhang Z, **Tan YZ**, Potter CS, Carragher B. Nat Methods. 2018 Oct;15(10):793-795. doi: 10.1038/s41592-018-0139-3. Epub 2018 Sep 24. PMID: 30250056

[A novel \$\lambda\$ integrase-mediated seamless vector transgenesis platform for therapeutic protein expression.](#)

Makhija H, Roy S, Hoon S, **Ghadessy FJ**, Wong D, Jaiswal R, Campana D, Dröge P. Nucleic Acids Res. 2018 Sep 19;46(16):e99. doi: 10.1093/nar/gky500. PMID: 29893931

[Sub-2 Å Ewald curvature corrected structure of an AAV2 capsid variant.](#)

Tan YZ, Aiyer S, Mietzsch M, Hull JA, McKenna R, Grieger J, Samulski RJ, Baker TS, Agbandje-McKenna M, Lyumkis D. Nat Commun. 2018 Sep 7;9(1):3628. doi: 10.1038/s41467-018-06076-6. PMID: 30194371

[Rapid colorimetric detection of p53 protein function using DNA-gold nanoconjugates with applications for drug discovery and cancer diagnostics.](#)

Assah E, Goh W, Zheng XT, Lim TX, Li J, Lane D, **Ghadessy F**, Tan YN. Colloids Surf B Biointerfaces. 2018 Sep 1;169:214-221. doi: 10.1016/j.colsurfb.2018.05.007. Epub 2018 May 5. PMID: 29778960

[The MDM2/MDMX-p53 Antagonist PM2 Radiosensitizes Wild-Type p53 Tumors.](#)

Spiegelberg D, Mortensen AC, Lundsten S, **Brown CJ**, **Lane DP**, Nestor M. Cancer Res. 2018 Sep 1;78(17):5084-5093. doi: 10.1158/0008-5472.CAN-18-0440. Epub 2018 Jul 19. PMID: 30026328

[Constitutive activation of WASp in X-linked neutropenia renders neutrophils hyperactive.](#)

Keszei M, Record J, Kritikou JS, Wurzer H, Geyer C, Thiemann M, Drescher P, Brauner H, Köcher L, James J, He M, Baptista MA, Dahlberg CI, Biswas A, Lain S, **Lane DP**, Song W, Pütsep K, Vandenberghe P, Snapper SB, Westerberg LS. J Clin Invest. 2018 Aug 31;128(9):4115-4131. doi: 10.1172/JCI64772. Epub 2018 Aug 20. PMID: 30124469

[A novel molecular rotor facilitates detection of p53-DNA interactions using the Fluorescent Intercalator Displacement Assay.](#)

Goh WL, Lee MY, Lim TX, Chua JS, Brenner S, **Ghadessy FJ**, Teo YN. Sci Rep. 2018 Aug 28;8(1):12946. doi: 10.1038/s41598-018-31197-9. PMID: 30154420

[Guardian of Genome Editing.](#)

Ho T, **Lane DP**. CRISPR J. 2018 Aug;1:258-260. doi: 10.1089/crispr.2018.29021.dal. PMID: 31021215

[Mass Spectrometry Reveals the Direct Action of a Chemical Chaperone.](#)

Gault J, Lianoudaki D, Kaldmäe M, Kronqvist N, Rising A, Johansson J, Lohkamp B, Lain S, Allison TM, **Lane DP**, Marklund EG, Landreh M. J Phys Chem Lett. 2018 Jul 19;9(14):4082-4086. doi: 10.1021/acs.jpcllett.8b01817. Epub 2018 Jul 9. PMID: 29975538

[Synthetic 10FN3-based mono- and bivalent inhibitors of MDM2/X function.](#)

Lau SY, **Siau JW**, Sobota RM, Wang CI, Zhong P, **Lane DP**, **Ghadessy FJ**. Protein Eng Des Sel. 2018 Jul 1;31(7-8):301-312. doi: 10.1093/protein/gzy018. PMID: 30169723

[Targeting Phosphopeptide Recognition by the Human BRCA1 Tandem BRCT Domain to Interrupt BRCA1-Dependent Signaling.](#)

Periasamy J, Kurdekar V, Jasti S, Nijaguna MB, Boggaram S, Hurakadli MA, Raina D, Kurup LM, Chintha C, Manjunath K, Goyal A, Sadasivam G, Bharatham K, Padigaru M, Potluri V, **Venkitaraman AR**. Cell Chem Biol. 2018 Jun 21;25(6):677-690.e12. doi: 10.1016/j.chembiol.2018.02.012. Epub 2018 Mar 29. PMID: 29606576

[ICEC0942, an Orally Bioavailable Selective Inhibitor of CDK7 for Cancer Treatment.](#)

Patel H, **Periyasamy M**, Sava GP, Bondke A, Slafer BW, Kroll SHB, Barbazanges M, Starkey R, Ottaviani S, Harrod A, Aboagye EO, Buluwela L, Fuchter MJ, Barrett AGM, Coombes RC, Ali S. Mol Cancer Ther. 2018 Jun;17(6):1156-1166. doi: 10.1158/1535-7163.MCT-16-0847. Epub 2018 Mar 15. PMID: 29545334

[Xenoprotein engineering via synthetic libraries.](#)

Gates ZP, Vinogradov AA, Quartararo AJ, Bandyopadhyay A, Choo ZN, Evans ED, Halloran KH, Mijalis AJ, Mong SK, Simon MD, Standley EA, Styduhar ED, Tasker SZ, Touti F, Weber JM, Wilson JL, Jamison TF, Pentelute BL. Proc Natl Acad Sci U S A. 2018 Jun 5;115(23):E5298-E5306. doi: 10.1073/pnas.1722633115. Epub 2018 May 21. PMID: 29784819

[Macrocyclic \$\alpha\$ helical peptide therapeutic modality: A perspective of learnings and challenges.](#)

Sawyer TK, Partridge AW, Kaan HYK, Juang YC, Lim S, Johannes C, Yuen TY, Verma C, Kannan S, Aronica P, Tan YS, Sherborne B, Ha S, Hochman J, Chen S, Surdi L, Peier A, Sauvagnat B, Dandliker PJ, **Brown CJ**, Ng S, Ferrer F, **Lane DP**. Bioorg Med Chem. 2018 Jun 1;26(10):2807-2815. doi: 10.1016/j.bmc.2018.03.008. Epub 2018 Mar 16. PMID: 29598901

[Spotiton: New features and applications.](#)

Dandey VP, Wei H, Zhang Z, **Tan YZ**, Acharya P, Eng ET, Rice WJ, Kahn PA, Potter CS, Carragher B. J Struct Biol. 2018 May;202(2):161-169. doi: 10.1016/j.jsb.2018.01.002. PMID: 29366716

[Site-Selective Cysteine-Cyclooctyne Conjugation.](#)

Zhang C, Dai P, Vinogradov AA, **Gates ZP**, Pentelute BL. Angew Chem Int Ed Engl. 2018 May 28;57(22):6459-6463. doi: 10.1002/anie.201800860. Epub 2018 Apr 26. PMID: 29575377

[Routine single particle CryoEM sample and grid characterization by tomography.](#)

Noble AJ, Dandey VP, Wei H, Brasch J, Chase J, Acharya P, **Tan YZ**, Zhang Z, Kim LY, Scapin G, Rapp M, Eng ET, Rice WJ, Cheng A, Negro CJ, Shapiro L, Kwong PD, Jeruzalmi D, des Georges A, Potter CS, Carragher B. Elife. 2018 May 29;7:e34257. doi: 10.7554/eLife.34257. PMID: 29809143

[p53 isoforms regulate premature aging in human cells.](#)

von Muhlinen N, Horikawa I, Alam F, Isogaya K, Lissa D, Vojtesek B, **Lane DP**, Harris CC. Oncogene. 2018 May;37(18):2379-2393. doi: 10.1038/s41388-017-0101-3. Epub 2018 Feb 12. PMID: 29429991

[Autophagic flux blockage by accumulation of weakly basic tenovins leads to elimination of B-Raf mutant tumour cells that survive vemurafenib.](#)

Ladds MJGW, Pastor-Fernández A, Popova G, van Leeuwen IMM, Eng KE, Drummond CJ, Johansson L, Svensson R, Westwood NJ, McCarthy AR, Tholander F, Popa M, **Lane DP**, McCormack E, McInerney GM, Bhatia R, Laín S. PLoS One. 2018 Apr 23;13(4):e0195956. doi: 10.1371/journal.pone.0195956. eCollection 2018. PMID: 29684045

[Ensemble cryoEM elucidates the mechanism of insulin capture and degradation by human insulin degrading enzyme.](#)

Zhang Z, Liang WG, Bailey LJ, **Tan YZ**, Wei H, Wang A, Farcasanu M, Woods VA, McCord LA, Lee D, Shang W, Deprez-Poulain R, Deprez B, Liu DR, Koide A, Koide S, Kossiakoff AA, Li S, Carragher B, Potter CS, Tang WJ. Elife. 2018 Mar 29;7:e33572. doi: 10.7554/eLife.33572. PMID: 29596046

[Amide-forming chemical ligation via O-acyl hydroxamic acids.](#)

Dunkelmann DL, Hirata Y, Totaro KA, Cohen DT, Zhang C, **Gates ZP**, Pentelute BL. Proc Natl Acad Sci U S A. 2018 Apr 10;115(15):3752-3757. doi: 10.1073/pnas.1718356115. Epub 2018 Mar 26. PMID: 29581295

[A DHODH inhibitor increases p53 synthesis and enhances tumor cell killing by p53 degradation blockage.](#)

Ladds MJGW, van Leeuwen IMM, Drummond CJ, Chu S, Healy AR, Popova G, Pastor Fernández A, Mollick T, Darekar S, Sedimbi SK, Nekulova M, Sachweh MCC, Campbell J, Higgins M, Tuck C, Popa M, Safont MM, Gelebart P, Fandalyuk Z, Thompson AM, Svensson R, Gustavsson AL, Johansson L, Färnegårdh K, Yngve U, Saleh A, Haraldsson M, D'Hollander ACA, Franco M, Zhao Y, Håkansson M, Walse B, Larsson K, Peat EM, Pelechano V, Lunec J, Vojtesek B, Carmena M, Earnshaw WC, McCarthy AR, Westwood NJ, Arsenian-Henriksson M, **Lane DP**, Bhatia R, McCormack E, Laín S. Nat Commun. 2018 Mar 16;9(1):1107. doi: 10.1038/s41467-018-03441-3. PMID: 29549331

[Publisher Correction: A DHODH inhibitor increases p53 synthesis and enhances tumor cell killing by p53 degradation blockage.](#)

Ladds MJGW, ... **Lane DP**, Bhatia R, McCormack E, Laín S. Nat Commun. 2018 May 22;9(1):2071. doi: 10.1038/s41467-018-04198-5. PMID: 29789663

[Single-molecule localization microscopy reveals molecular transactions during RAD51 filament assembly at cellular DNA damage sites.](#)

Haas KT, Lee M, Esposito A, **Venkitaraman AR**. Nucleic Acids Res. 2018 Mar 16;46(5):2398-2416. doi: 10.1093/nar/gkx1303. PMID: 29309696

[Lipids Shape the Electron Acceptor-Binding Site of the Peripheral Membrane Protein Dihydroorotate Dehydrogenase.](#)

Costeira-Paulo J, Gault J, Popova G, Ladds MJGW, van Leeuwen IMM, Sarr M, Olsson A, **Lane DP**, Laín S, Marklund EG, Landreh M. Cell Chem Biol. 2018 Mar 15;25(3):309-317.e4. doi: 10.1016/j.chembiol.2017.12.012. Epub 2018 Jan 18. PMID: 29358052

[Effect of VH-VL Families in Pertuzumab and Trastuzumab Recombinant Production, Her2 and FcγIIA Binding.](#)

Ling WL, Lua WH, Poh JJ, Yeo JY, **Lane DP**, Gan SK. Front Immunol. 2018 Mar 12;9:469. doi: 10.3389/fimmu.2018.00469. eCollection 2018. PMID: 29593727

[Evidence for allosteric effects on p53 oligomerization induced by phosphorylation.](#)

Muller P, Chan JM, Simoncik O, Fojta M, **Lane DP**, Hupp T, Vojtesek B. Protein Sci. 2018 Feb;27(2):523-530. doi: 10.1002/pro.3344. Epub 2017 Dec 8. PMID: 29124793

[Laccase-Catalyzed Synthesis of Low-Molecular-Weight Lignin-Like Oligomers and their Application as UV-Blocking Materials.](#)

Lim J, Sana B, Krishnan R, Seayad J, **Ghadessy FJ**, Jana S, Ramalingam B. Chem Asian J. 2018 Feb 2;13(3):284-291. doi: 10.1002/asia.201701573. Epub 2018 Jan 5. PMID: 29214741

[BRCA2 Regulates Transcription Elongation by RNA Polymerase II to Prevent R-Loop Accumulation.](#)

Shivji MKK, Renaudin X, Williams ÇH, **Venkitaraman AR**. Cell Rep. 2018 Jan 23;22(4):1031-1039. doi: 10.1016/j.celrep.2017.12.086. Epub 2018 Jan 28. PMID: 29386125

[The effects of Antibody Engineering CH and CL in Trastuzumab and Pertuzumab recombinant models: Impact on antibody production and antigen-binding.](#)

Lua WH, Ling WL, Yeo JY, Poh JJ, **Lane DP**, Gan SK. Sci Rep. 2018 Jan 15;8(1):718. doi: 10.1038/s41598-017-18892-9. PMID: 29335579

[Therapeutic targeting of p53: all mutants are equal, but some mutants are more equal than others.](#)

Sabapathy K, **Lane DP**. Nat Rev Clin Oncol. 2018 Jan;15(1):13-30. doi: 10.1038/nrclinonc.2017.151. Epub 2017 Sep 26. PMID: 28948977

[Monoclonal Antibodies against Specific p53 Hotspot Mutants as Potential Tools for Precision Medicine.](#)

Hwang LA, Phang BH, Liew OW, Iqbal J, Koh XH, Koh XY, Othman R, Xue Y, Richards AM, **Lane DP**, Sabapathy K. Cell Rep. 2018 Jan 2;22(1):299-312. doi: 10.1016/j.celrep.2017.11.112. PMID: 29298430

2017

[Structure-activity studies of Mdm2/Mdm4-binding stapled peptides comprising non-natural amino acids.](#)

Chee SMQ, Wongsantichon J, **Siau J**, Thean D, Ferrer F, Robinson RC, **Lane DP**, **Brown CJ**, **Ghadessy FJ**. PLoS One. 2017 Dec 11;12(12):e0189379. doi: 10.1371/journal.pone.0189379. eCollection 2017. PMID: 29228061

[Role of the N-terminal lid in regulating the interaction of phosphorylated MDMX with p53.](#)

Chan JV, Koh DXP, Liu Y, Joseph TL, **Lane DP**, Verma CS, Tan YS. Oncotarget. 2017 Dec 1;8(68):112825-112840. doi: 10.18632/oncotarget.22829. eCollection 2017 Dec 22. PMID: 29348869

[RADX interacts with single-stranded DNA to promote replication fork stability.](#)

Schubert L, **Ho T**, Hoffmann S, Haahr P, Guerillon C, Mailand N. EMBO Rep. 2017 Nov 18(11):1991-2003. doi: 10.15252/embr.201744877. PMID: 29021206

[Characterizing the conformational landscape of MDM2-binding p53 peptides using Molecular Dynamics simulations.](#)

Yadahalli S, Li J, **Lane DP**, Gosavi S, Verma CS. Sci Rep. 2017 Nov 15;7(1):15600. doi: 10.1038/s41598-017-15930-4. PMID: 29142290

[Library Design-Facilitated High-Throughput Sequencing of Synthetic Peptide Libraries.](#)

Vinogradov AA, **Gates ZP**, Zhang C, Quartararo AJ, Halloran KH, Pentelute BL. ACS Comb Sci. 2017 Nov 13;19(11):694-701. doi: 10.1021/acscombsci.7b00109. Epub 2017 Sep 29. PMID: 28892357

[A yeast two-hybrid system for the screening and characterization of small-molecule inhibitors of protein-protein interactions identifies a novel putative Mdm2-binding site in p53.](#)

Wong JH, Alfatah M, Sin MF, Sim HM, Verma CS, **Lane DP**, Arumugam P. BMC Biol. 2017 Nov 9;15(1):108. doi: 10.1186/s12915-017-0446-7. PMID: 29121928

[p53 controls expression of the DNA deaminase APOBEC3B to limit its potential mutagenic activity in cancer cells.](#)

Periyasamy M, Singh AK, Gemma C, Kranjec C, Farzan R, Leach DA, Navaratnam N, Pálincás HL, Vértessy BG, Fenton TR, Doorbar J, Fuller-Pace F, Meek DW, Coombes RC, Buluwela L, Ali S. Nucleic Acids Res. 2017 Nov 2;45(19):11056-11069. doi: 10.1093/nar/gkx721. PMID: 28977491

[Modulating Protein-Protein Interactions of the Mitotic Polo-like Kinases to Target Mutant KRAS.](#)

Narvaez AJ, Ber S, Crooks A, Emery A, Hardwick B, Guarino Almeida E, Huggins DJ, Perera D, Roberts-Thomson M, Azzarelli R, Hood FE, Prior IA, Walker DW, Boyce R, Boyle RG, Barker SP, Torrance CJ, McKenzie GJ, **Venkitaraman AR**. Cell Chem Biol. 2017 Aug 17;24(8):1017-1028.e7. doi: 10.1016/j.chembiol.2017.07.009. Epub 2017 Aug 10. PMID: 28807782

[Computationally-guided optimization of small-molecule inhibitors of the Aurora A kinase-TPX2 protein-protein interaction.](#)

Cole DJ, Janecek M, Stokes JE, Rossmann M, Faver JC, McKenzie GJ, **Venkitaraman AR**, Hyvönen M, Spring DR, Huggins DJ, Jorgensen WL. Chem Commun (Camb). 2017 Aug 17;53(67):9372-9375. doi: 10.1039/c7cc05379g. PMID: 28787041

[Addressing preferred specimen orientation in single-particle cryo-EM through tilting.](#)

Tan YZ, Baldwin PR, Davis JH, Williamson JR, Potter CS, Carragher B, Lyumkis D. Nat Methods. 2017 Aug;14(8):793-796. doi: 10.1038/nmeth.4347. Epub 2017 Jul 3. PMID: 28671674

[Inhibiting p53 Acetylation Reduces Cancer Chemotoxicity.](#)

Zheng S, Koh XY, Goh HC, Rahmat SAB, Hwang LA, **Lane DP**. Cancer Res. 2017 Aug 15;77(16):4342-4354. doi: 10.1158/0008-5472.CAN-17-0424. Epub 2017 Jun 27. PMID: 28655792

[Impact of Alternative Splicing on the Human Proteome.](#)

Liu Y, González-Porta M, Santos S, Brazma A, Marioni JC, Aebersold R, **Venkitaraman AR**, Wickramasinghe VO. Cell Rep. 2017 Aug 1;20(5):1229-1241. doi: 10.1016/j.celrep.2017.07.025. PMID: 28768205

[Big data in cryoEM: automated collection, processing and accessibility of EM data.](#)

Baldwin PR, **Tan YZ**, Eng ET, Rice WJ, Noble AJ, Negro CJ, Cianfrocco MA, Potter CS, Carragher B. Curr Opin Microbiol. 2018 Jun;43:1-8. doi: 10.1016/j.mib.2017.10.005. Epub 2017 Oct 31. PMID: 29100109

[A Class of Environmental and Endogenous Toxins Induces BRCA2 Haploinsufficiency and Genome Instability.](#)

Tan SLW, Chadha S, Liu Y, Gabasova E, Perera D, Ahmed K, Constantinou S, Renaudin X, Lee M, Aebersold R, **Venkitaraman AR**. Cell. 2017 Jun 1;169(6):1105-1118.e15. doi: 10.1016/j.cell.2017.05.010. PMID: 28575672

[Enhancing Specific Disruption of Intracellular Protein Complexes by Hydrocarbon Stapled Peptides Using Lipid Based Delivery.](#)

Thean D, Ebo JS, Luxton T, Lee XC, Yuen TY, Ferrer FJ, Johannes CW, **Lane DP**, **Brown CJ**. Sci Rep. 2017 May 11;7(1):1763. doi: 10.1038/s41598-017-01712-5. PMID: 28496125

[Protein and Protease Sensing by Allosteric Derepression.](#)

Goh HC, **Ghadessy FJ**, Nirantar S. Methods Mol Biol. 2017;1596:167-177. doi: 10.1007/978-1-4939-6940-1_11. PMID: 28293887

[Genomic modelling of the ESR1 Y537S mutation for evaluating function and new therapeutic approaches for metastatic breast cancer.](#)

Harrod A, Fulton J, Nguyen VTM, **Periyasamy M**, Ramos-Garcia L, Lai CF, Metodieva G, de Giorgio A, Williams RL, Santos DB, Gomez PJ, Lin ML, Metodiev MV, Stebbing J, Castellano L, Magnani L, Coombes RC, Buluwela L, Ali S. Oncogene. 2017 Apr 20;36(16):2286-2296. doi: 10.1038/onc.2016.382. Epub 2016 Oct 17. PMID: 27748765

[The hot-spot p53R172H mutant promotes formation of giant spermatogonia triggered by DNA damage.](#)

Xue Y, Raharja A, Sim W, Wong ES, Rahmat SA, **Lane DP**. Oncogene. 2017 Apr 6;36(14):2002-2013. doi: 10.1038/onc.2016.374. Epub 2016 Nov 21. PMID: 27869164

[Exploiting the p53 Pathway for Therapy.](#)

Cheek CF, **Lane DP**. Cold Spring Harb Perspect Med. 2017 Mar 1;7(3):a026310. doi: 10.1101/cshperspect.a026310. PMID: 28193768

[Perplexing cooperative folding and stability of a low-sequence complexity, polyproline 2 protein lacking a hydrophobic core.](#)

Gates ZP, Baxa MC, Yu W, Riback JA, Li H, Roux B, Kent SB, Sosnick TR. Proc Natl Acad Sci U S A. 2017 Feb 28;114(9):2241-2246. doi: 10.1073/pnas.1609579114. Epub 2017 Feb 13. PMID: 28193869

[Development of a genetically programmed vanillin-sensing bacterium for high-throughput screening of lignin-degrading enzyme libraries.](#)

Sana B, Chia KHB, Raghavan SS, Ramalingam B, Nagarajan N, Seayad J, **Ghadessy FJ**. Biotechnol Biofuels. 2017 Feb 3;10:32. doi: 10.1186/s13068-017-0720-5. eCollection 2017. PMID: 28174601

[Anatomy of Mdm2 and Mdm4 in evolution.](#)

Tan BX, Liew HP, Chua JS, **Ghadessy FJ**, Tan YS, **Lane DP**, Coffill CR. J Mol Cell Biol. 2017 Feb 1;9(1):3-15. doi: 10.1093/jmcb/mjx002. PMID: 28077607 Review.

[Water-Bridge Mediates Recognition of mRNA Cap in eIF4E.](#)

Lama D, Pradhan MR, Brown CJ, Eapen RS, Joseph TL, Kwoh CK, **Lane DP**, Verma CS. Structure. 2017 Jan 3;25(1):188-194. doi: 10.1016/j.str.2016.11.006. Epub 2016 Dec 1. PMID: 27916520

[Going native: Complete removal of protein purification affinity tags by simple modification of existing tags and proteases.](#)

Goh HC, Sobota RM, **Ghadessy FJ**, Nirantar S. Protein Expr Purif. 2017 Jan;129:18-24. doi: 10.1016/j.pep.2016.09.001. Epub 2016 Sep 8. PMID: 27614048 Free article.