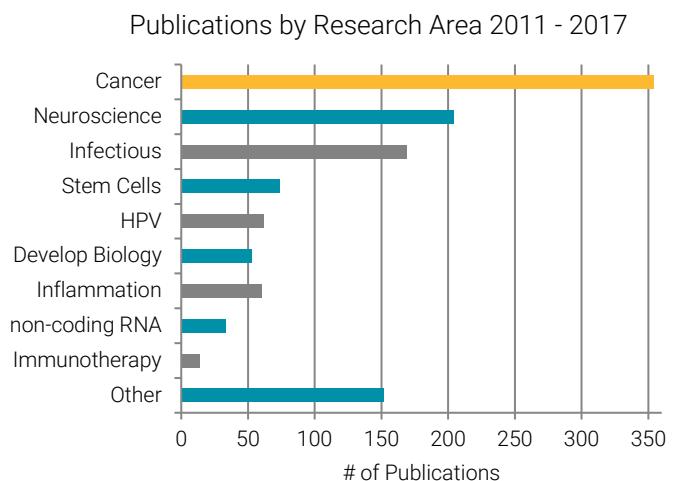
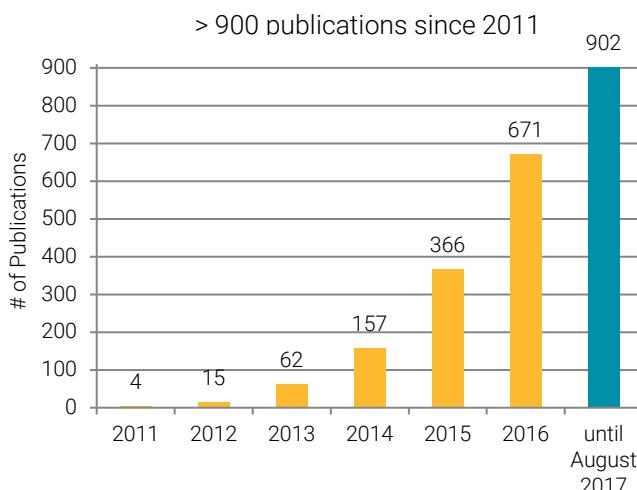


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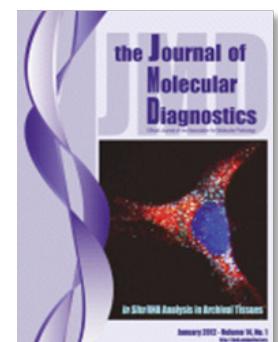
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RNAscope is a new technology for single-molecule multiplex *in situ* RNA detection. This publication details the core principles behind RNAscope Technology.

RNAscope: A Novel *In Situ* RNA Analysis Platform for Formalin-Fixed Paraffin-Embedded Tissues.

Wang F, Flanagan J, Su N, Wang LC, Bui S, Nielson A, Wu X, Vo HT, Ma XJ, Luo Y (2012). J of Mol Diagnostics, 14(1):22–29.

[PMID: 22166544](https://pubmed.ncbi.nlm.nih.gov/22166544/). doi:10.1016/j.jmoldx.2011.08.002.



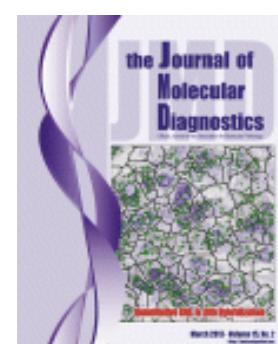
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Automated Quantitative RNA *In Situ* Hybridization for Resolution of Equivocal and Heterogeneous *ERBB2*(*HER2*) Status in Invasive Breast Carcinoma.

Wang Z, Portier BP, Gruver AM, Bui S, Wang H, Su N, Vo HT, Ma XJ, Luo Y, Budd GT, Tubbs RR (2013). J of Mol Diagnostics, 15(2):210-219.

[PMID: 23305906](https://pubmed.ncbi.nlm.nih.gov/23305906/). doi:10.1016/j.jmoldx.2012.10.003.



2017 PUBLICATIONS

1. **Phosphorylated Mechanistic Target of Rapamycin (p-mTOR) and Noncoding RNA Expression in Follicular and Hürthle Cell Thyroid Neoplasm.** Covach A, Patel S, Hardin H, Lloyd RV. *Endocr Pathol.* 2017 Jun 28. [PMID: 28660408](#) | DOI: 10.1007/s12022-017-9490-7
2. **E2F1-regulated long non-coding RNA RAD51-AS1 promotes cell cycle progression, inhibits apoptosis and predicts poor prognosis in epithelial ovarian cancer**
Zhang X, Liu G, Qiu J, Zhang N, Ding J, Hua K. *Sci Rep.* 2017 Jun 30;7(1):4469. [PMID: 28667302](#) | DOI: 10.1038/s41598-017-04736-z
3. **The MBNL3 splicing factor promotes hepatocellular carcinoma by increasing PXN expression through the alternative splicing of lncRNA-PXN-AS1.**
Yuan JH, Liu XN, Wang TT, Pan W, Tao QF, Zhou WP, Wang F, Sun SH. *Nat Cell Biol.* 2017 May 29. [PMID: 28553938](#) | DOI: 10.1038/ncb3538
4. **LincIN, a novel NF90-binding long non-coding RNA, is overexpressed in advanced breast tumors and involved in metastasis.** Jiang Z, Slater CM, Zhou Y, Devarajan K, Ruth KJ, Li Y, Cai KQ, Daly M, Chen X. *Breast Cancer Res.* 2017 May 30;19(1):62. [PMID: 28558830](#) | DOI: 10.1186/s13058-017-0853-2
5. **A Prostate Cancer “Nimbosus”: Genomic Instability and SChLAP1 Dysregulation Underpin Aggression of Intraductal and Cribriform Subpathologies**
Chua MLK, Loa W, Pintiliea M, Murgica J, Lalonde E, Bhandari V, Mahamud O, Gopaland A, Kweldame CF, van Leenderse GJLH, Verhoeve EI, Hooglande AM, Livingstone J, Berlina A, Dal Pra A, Meng A, Zhang J, Orain M, Picard V, Hovington H, Bergeron A, Lacombe L, Fradet Y, Tétu B, Reuter VE, Fleshner N, Fraser M, Boutros PC, van der Kwaste TH, Bristowa RG. *European Urology* (2017) [DOI: 10.1016/j.eururo.2017.04.034](#)
6. **Long Noncoding RNA MANTIS Facilitates Endothelial Angiogenic Function.**
Leisegang MS, Fork C, Josipovic I, Richter F, Preussner J, Hu J, Miller MJ, Epah JN, Hofmann P, Günther S, Moll F, Valasarajan C, Heidler J, Ponomareva Y, Freiman TM, Maegdefessel L, Plate KH, Mittelbronn M, Uchida S, Künne C, Stellos K, Schermuly RT, Weissmann N, Devraj K, Wittig I, Boon RA, Dimmeler S, Pullamsetti SS, Looso M, Miller FJ, Brandes RP. *Circulation.* 2017 Mar 28. [PMID: 28351900](#) | DOI: 10.1161/CIRCULATIONAHA.116.026991
7. **ALS Along the Axons – Expression of Coding and Noncoding RNA Differs in Axons of ALS models**
Rotem N, Magen I, Ionescu A, Gershoni-Emek N, Altman T, Costa CJ, Gradus T, Pasmanik-Chor M, Willis DE, Ben-Dov IZ, Hornstein E, Perlson E. *Sci Rep.* 2017 Mar 16;7:44500. [PMID: 28300211](#) | DOI: 10.1038/srep44500
8. **The LINK-A lncRNA interacts with PtdIns(3,4,5)P3 to hyperactivate AKT and confer resistance to AKT inhibitors.** Lin A, Hu Q, Li C, Xing Z, Ma G, Wang C, Li J, Ye Y, Yao J, Liang K, Wang S, Park PK, Marks JR, Zhou Y, Zhou J, Hung MC, Liang H, Hu Z, Shen H, Hawke DH, Han L, Zhou Y, Lin C, Yang L. *Nat Cell Biol.* 2017 Feb 20. [PMID: 28218907](#) | DOI: 10.1038/ncb3473
9. **UV Irradiation Induces a Non-coding RNA that Functionally Opposes the Protein Encoded by the Same Gene.** Williamson L, Saponaro M, Boeing S, East P, Mitter R, Kantidakis T, Kelly GP, Lobley A, Walker J, Spencer-Dene B, Howell M, Stewart A, Svejstrup JQ. *Cell.* 2017 Feb 16. [PMID: 28215706](#) | DOI: 10.1016/j.cell.2017.01.019

2017 PUBLICATIONS

10. **A ROR1–HER3–lncRNA signalling axis modulates the Hippo–YAP pathway to regulate bone metastasis**
 Li C, Wang S, Xing Z, Lin A, Liang K, Song J, Hu Q, Yao J, Chen Z, Park PK, Hawke DH, Zhou J, Zhou Y, Zhang S, Liang H, Hung MC, Gallick GE, Han L, Lin C, Yang L. *Nat Cell Biol.* 2017 Jan 23.
[PMID: 28114269](#) | DOI: 10.1038/ncb3464
11. **Liposomal Spherical Nucleic Acids for Regulating Long Noncoding RNAs in the Nucleus.**
 Sprangers AJ, Hao L, Banga RJ, Mirkin CA. *Small.* 2016 Dec 27.
[PMID: 28026123](#) | DOI: 10.1002/smll.201602753
12. **Detection of ALK rearrangements in lung cancer patients using a homebrew PCR assay.**
 H. Yu, J. Chang, F. Liu, Q. Wang, Y. Lu, Z. Zhang, J. Shen, Q. Zhai, X. Meng, J. Wang and X. Ye. *Oncotarget* 2017. PubMed ID: 28032602 - doi: 10.18632/oncotarget.13886
13. **UV Irradiation Induces a Non-coding RNA that Functionally Opposes the Protein Encoded by the Same Gene.**
 L. Williamson, M. Saponaro, S. Boeing, P. East, R. Mitter, T. Kantidakis, G. P. Kelly, A. Lobley, J. Walker, B. Spencer-Dene, M. Howell, A. Stewart and J. Q. Svejstrup. *Cell* 2017.
 PubMed ID: 28215706 - doi: 10.1016/j.cell.2017.01.019
14. **ALS Along the Axons - Expression of Coding and Noncoding RNA Differs in Axons of ALS models.**
 N. Rotem, I. Magen, A. Ionescu, N. Gershoni-Emek, T. Altman, C. J. Costa, T. Gradus, M. Pasmanik-Chor, D. E. Willis, I. Z. Ben-Dov, E. Hornstein and E. Perlson. *Sci Rep* 2017.
 PubMed ID: 28300211 - doi: 10.1038/srep44500
15. **The LINK-A lncRNA interacts with PtdIns(3,4,5)P3 to hyperactivate AKT and confer resistance to AKT inhibitors.** LID . A. Lin, Q. Hu, C. Li, Z. Xing, G. Ma, C. Wang, J. A.-O. h. o. o. Li, Y. Ye, J. Yao, K. Liang, S. Wang, P. K. Park, J. R. Marks, Y. Zhou, J. Zhou, M. C. Hung, H. A.-O. h. o. o. X. Liang, Z. Hu, H. Shen, D. H. A.-O. h. o. o. Hawke, L. Han, Y. A.-O. h. o. o. Zhou, C. Lin and L. Yang. 2017. doi: 10.1038/ncb3473
16. **A ROR1-HER3-lncRNA signalling axis modulates the Hippo-YAP pathway to regulate bone metastasis.**
 C. Li, S. Wang, Z. Xing, A. Lin, K. Liang, J. Song, Q. Hu, J. Yao, Z. Chen, P. K. Park, D. H. Hawke, J. Zhou, Y. Zhou, S. Zhang, H. Liang, M. C. Hung, G. E. Gallick, L. Han, C. Lin and L. Yang. *Nat Cell Biol* 2017.
 PubMed ID: 28114269 - doi: 10.1038/ncb3464
17. **The evolving concept of cancer stem-like cells in thyroid cancer and other solid tumors.**
 H. Hardin, R. Zhang, H. Helein, D. Buehler, Z. Guo and R. V. Lloyd. *Lab Invest* 2017.
 PubMed ID: 28394318 - doi: 10.1038/labinvest.2017.41
18. **The Non-Coding Transcriptome of Prostate Cancer: Implications for Clinical Practice.**
 I. V. Bijnsdorp, M. E. van Royen, G. W. Verhaegh and E. S. Martens-Uzunova. *Molecular Diagnosis & Therapy* 2017. doi: 10.1007/s40291-017-0271-2

2016 PUBLICATIONS

19. Long non-coding RNA chromogenic *in situ* hybridisation signal pattern correlation with breast tumour pathology. Z. Zhang, D. L. Weaver, D. Olsen, J. deKay, Z. Peng, T. Ashikaga and M. F. Evans. *J Clin Pathol* 2016. PubMed ID: 26323944 - doi: 10.1136/jclinpath-2015-203275
20. MALAT1 Long Non-coding RNA Expression in Thyroid Tissues: Analysis by In Situ Hybridization and Real-Time PCR. R. Zhang, H. Hardin, W. Huang, J. Chen, S. Asioli, A. Righi, F. Maletta, A. Sapino and R. V. Lloyd. *Endocr Pathol* 2016. PubMed ID: 27696303 - doi: 10.1007/s12022-016-9453-4
21. Ulcerative Colitis-Associated Long Noncoding RNA, BC012900, Regulates Intestinal Epithelial Cell Apoptosis. F. Wu, Y. Huang, F. Dong and J. H. Kwon. *Inflamm Bowel Dis* 2016. PubMed ID: 26937624 - doi: 10.1097/mib.0000000000000691
22. JC Polyomavirus Abundance and Distribution in Progressive Multifocal Leukoencephalopathy (PML) Brain Tissue Implicates Myelin Sheath in Intracerebral Dissemination of Infection. K. A. Wharton, Jr., C. Quigley, M. Themeles, R. W. Dunstan, K. Doyle, E. Cahir-McFarland, J. Wei, A. Buko, C. E. Reid, C. Sun, P. Carmillo, G. Sur, J. P. Carulli, K. G. Mansfield, S. V. Westmoreland, S. M. Staugaitis, R. J. Fox, W. Meier and S. E. Goelz. *PLoS One* 2016. PubMed ID: 27191595 - doi: 10.1371/journal.pone.0155897
23. Functional annotation of the vlinc class of non-coding RNAs using systems biology approach. G. St Laurent, Y. Vyatkin, D. Antonets, M. Ri, Y. Qi, O. Saik, D. Shtokalo, M. J. de Hoon, H. Kawaji, M. Itoh, T. Lassmann, E. Arner, A. R. Forrest, E. Nicolas, T. A. McCaffrey, P. Carninci, Y. Hayashizaki, C. Wahlestedt and P. Kapranov. *Nucleic Acids Res* 2016. PubMed ID: 27001520 - doi: 10.1093/nar/gkw162
24. Liposomal Spherical Nucleic Acids for Regulating Long Noncoding RNAs in the Nucleus. A. J. Sprangers, L. Hao, R. J. Banga and C. A. Mirkin. *Small* 2016. PubMed ID: 28026123 - doi: 10.1002/smll.201602753
25. Identification and Validation of PCAT14 as Prognostic Biomarker in Prostate Cancer. S. Shukla, X. Zhang, Y. S. Niknafs, L. Xiao, R. Mehra, M. Cieslik, A. Ross, E. Schaeffer, B. Malik, S. Guo, S. M. Freier, H. H. Bui, J. Siddiqui, X. Jing, X. Cao, S. M. Dhanasekaran, F. Y. Feng, A. M. Chinnaiyan and R. Malik. *Neoplasia* 2016. PubMed ID: 27566105 - doi: 10.1016/j.neo.2016.07.001
26. A Primate lncRNA Mediates Notch Signaling during Neuronal Development by Sequestering miRNA. N. Rani, T. J. Nowakowski, H. Zhou, S. E. Godshalk, V. Lisi, A. R. Kriegstein and K. S. Kosik. *Neuron* 2016. PubMed ID: 27263970 - doi: 10.1016/j.neuron.2016.05.005
27. Overexpression of the Long Non-coding RNA SCHLAP1 Independently Predicts Lethal Prostate Cancer. R. Mehra, A. M. Udager, T. U. Ahearn, X. Cao, F. Y. Feng, M. Loda, J. S. Petimar, P. Kantoff, L. A. Mucci and A. M. Chinnaiyan. *Eur Urol* 2016. PubMed ID: 26724257 - doi: 10.1016/j.eururo.2015.12.003
28. The LINK-A lncRNA activates normoxic HIF1alpha signalling in triple-negative breast cancer. A. Lin, C. Li, Z. Xing, Q. Hu, K. Liang, L. Han, C. Wang, D. H. Hawke, S. Wang, Y. Zhang, Y. Wei, G. Ma, P. K. Park, J. Zhou, Y. Zhou, Z. Hu, Y. Zhou, J. R. Marks, H. Liang, M. C. Hung, C. Lin and L. Yang. *Nat Cell Biol* 2016. PubMed ID: 26751287 - doi: 10.1038/ncb3295
29. The emerging role of long non-coding RNAs in cutaneous melanoma. E. Leucci, E. A. Coe, J. C. Marine and K. W. Vance. *Pigment Cell Melanoma Res* 2016. PubMed ID: 27606977 - doi: 10.1111/pcmr.12537

2016 PUBLICATIONS

30. A feed-forward regulatory loop between androgen receptor and PlncRNA-1 promotes prostate cancer progression. Z. Fang, C. Xu, Y. Li, X. Cai, S. Ren, H. Liu, Y. Wang, F. Wang, R. Chen, M. Qu, Y. Wang, Y. Zhu, W. Zhang, X. Shi, J. Yao, X. Gao, J. Hou, C. Xu and Y. Sun. *Cancer Lett* 2016.
PubMed ID: 26808578 - doi: 10.1016/j.canlet.2016.01.033
31. cAMP/CREB-regulated LINC00473 marks LKB1-inactivated lung cancer and mediates tumor growth. Z. Chen, J. L. Li, S. Lin, C. Cao, N. T. Gimbrone, R. Yang, D. A. Fu, M. B. Carper, E. B. Haura, M. B. Schabath, J. Lu, A. L. Amelio, W. D. Cress, F. J. Kaye and L. Wu. *J Clin Invest* 2016.
PubMed ID: 27140397 - doi: 10.1172/jci85250
32. A long noncoding RNA associated with susceptibility to celiac disease. A. Castellanos-Rubio, N. Fernandez-Jimenez, R. Kratchmarov, X. Luo, G. Bhagat, P. H. Green, R. Schneider, M. Kiledjian, J. R. Bilbao and S. Ghosh. *Science* 2016. PubMed ID: 27034373 - doi: 10.1126/science.aad0467

2015 PUBLICATIONS

33. H19 lncRNA alters DNA methylation genome wide by regulating S-adenosylhomocysteine hydrolase. J. Zhou, L. Yang, T. Zhong, M. Mueller, Y. Men, N. Zhang, J. Xie, K. Giang, H. Chung, X. Sun, L. Lu, G. G. Carmichael, H. S. Taylor and Y. Huang. *Nat Commun* 2015.
PubMed ID: 26687445 - doi: 10.1038/ncomms10221
34. LncRNA BCAR4 wires up signaling transduction in breast cancer. Z. Xing, P. K. Park, C. Lin and L. Yang. *RNA Biol* 2015.
PubMed ID: 26016563 - doi: 10.1080/15476286.2015.1053687
35. The long noncoding RNA Pnky regulates neuronal differentiation of embryonic and postnatal neural stem cells. A. D. Ramos, R. E. Andersen, S. J. Liu, T. J. Nowakowski, S. J. Hong, C. C. Gertz, R. D. Salinas, H. Zarabi, A. R. Kriegstein and D. A. Lim. *Cell Stem Cell* 2015.
PubMed ID: 25800779 - doi: 10.1016/j.stem.2015.02.007
36. TOPAZ1, a germ cell specific factor, is essential for male meiotic progression. A. Luangpraseuth-Prosper, E. Lesueur, L. Jouneau, E. Pailhoux, C. Cotinot and B. Mandon-Pepin. *Dev Biol* 2015. PubMed ID: 26358182 - doi: 10.1016/j.ydbio.2015.09.002
37. Novel long non-coding RNAs are specific diagnostic and prognostic markers for prostate cancer. R. Bottcher, A. M. Hoogland, N. Dits, E. I. Verhoef, C. Kweldam, P. Waranecki, C. H. Bangma, G. J. van Leenders and G. Jenster. *Oncotarget* 2015. PubMed ID: 25686826 - doi: 10.18632/oncotarget.2879

2014 PUBLICATIONS

38. **lncRNA directs cooperative epigenetic regulation downstream of chemokine signals.**
Z. Xing, A. Lin, C. Li, K. Liang, S. Wang, Y. Liu, P. K. Park, L. Qin, Y. Wei, D. H. Hawke, M. C. Hung, C. Lin and L. Yang. *Cell* 2014. PubMed ID: 25416949 - doi: 10.1016/j.cell.2014.10.013
39. **Evaluation of tissue PCA3 expression in prostate cancer by RNA in situ hybridization—a correlative study with urine PCA3 and TMPRSS2-ERG.** J. I. Warrick, S. A. Tomlins, S. L. Carskadon, A. M. Young, J. Siddiqui, J. T. Wei, A. M. Chinnaiyan, L. P. Kunju and N. Palanisamy. *Mod Pathol* 2014.
PubMed ID: 24072184 - doi: 10.1038/modpathol.2013.169
40. **Oncofetal long noncoding RNA PVT1 promotes proliferation and stem cell-like property of hepatocellular carcinoma cells by stabilizing NOP2.** F. Wang, J. H. Yuan, S. B. Wang, F. Yang, S. X. Yuan, C. Ye, N. Yang, W. P. Zhou, W. L. Li, W. Li and S. H. Sun. *Hepatology* 2014. PubMed ID: 25043274 - doi: 10.1002/hep.27239
41. **Modulation of hypoxia-signaling pathways by extracellular linc-RoR.**
K. Takahashi, I. K. Yan, H. Haga and T. Patel. *J Cell Sci* 2014.
PubMed ID: 24463816 - doi: 10.1242/jcs.141069
42. **A novel RNA in situ hybridization assay for the long noncoding RNA SChLAP1 predicts poor clinical outcome after radical prostatectomy in clinically localized prostate cancer.** R. Mehra, Y. Shi, A. M. Udager, J. R. Prensner, A. Sahu, M. K. Iyer, J. Siddiqui, X. Cao, J. Wei, H. Jiang, F. Y. Feng and A. M. Chinnaiyan. *Neoplasia* 2014. PubMed ID: 25499224 - doi: 10.1016/j.neo.2014.11.006

2013 PUBLICATIONS

43. **Expression profiling reveals developmentally regulated lncRNA repertoire in the mouse male germline.** J. Bao, J. Wu, A. S. Schuster, G. W. Hennig and W. Yan. *Biol Reprod* 2013. PubMed ID: 24048575 - doi: 10.1095/biolreprod.113.113308

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