

CURRICULUM VITAE



Jarno Drost, PhD

Group leader at the Princess Máxima Center for Pediatric Oncology and Oncode Institute

Websites

<https://research.prinsesmaximacentrum.nl/en/research-groups/drost-group>

<https://www.oncode.nl/research/groups/jarno-drost-group>

<https://www.drost-lab.com>

Current Positions

Jan 2023 – present	Senior Principal Investigator Oncode Institute
Jan 2023 – present	Platform lead Organoids at Oncode Accelerator Oncode Accelerator
Nov 2016 – present	Group Leader (tenured in 2021) Princess Máxima Center for Pediatric Oncology Utrecht, the Netherlands

Education

2005 – 2012	PhD student Netherlands Cancer Institute (lab of prof. R. Agami) Amsterdam, the Netherlands Thesis title: “ <i>Identifying novel components of human tumour suppressor networks</i> ”
2003 – 2005	Master’s degree Biomedical Sciences (<i>with highest honors</i>) Free University Amsterdam, the Netherlands
1999 – 2003	Bachelor’s degree Molecular Biology Institute of Life Sciences and Chemistry Utrecht, the Netherlands

Past Positions

2019 – 2022	Junior Principal Investigator Oncode Institute
2012 – 2016	Post-doctoral researcher Hubrecht Institute (lab of prof. H. Clevers) Utrecht, the Netherlands
2012	Post-doctoral researcher Netherlands Cancer Institute (lab of prof. R. Agami) Amsterdam, the Netherlands

Career Description

After getting his MSc degree in Biomedical Sciences (*with highest honors*) at the Free University (Amsterdam, the Netherlands), Jarno started his PhD research in the lab of prof. Reuven Agami at the Netherlands Cancer Institute (Amsterdam, the Netherlands). Here, he studied the genetic and epigenetic

alterations that are required for the transformation of human primary cells into cancer cells (Drost & Agami, Cell 2009; Drost & Mantovani et al., Nature Cell Biology 2010; Melo & Drost et al., Molecular Cell 2012). Additionally, he was involved in projects studying the role of non-coding RNAs, mRNA stability and mRNA processing in malignant transformation (Voorhoeve et al., Cell 2005; Elkon, Drost & van Haaften et al., Genome Biology 2012; Jenal et al., Cell 2012; Loayza-Puch et al., Genome Biology 2013).

To pursue his interest in cancer research and stem cell biology, Jarno undertook post-doctoral training in the lab of prof. Hans Clevers at the Hubrecht Institute (Utrecht, the Netherlands). He exploited intestinal stem cells, which can be expanded in a culture dish as “organoids”, to study tumorigenesis. He set up a colorectal cancer (CRC) progression model by introducing combinations of the most commonly mutated CRC genes in human colonic organoids using CRISPR/Cas9 genome editing. Using these models, he demonstrated that mutation of four defined genes is sufficient to transform healthy intestinal stem cells into invasive adenocarcinomas (Drost et al., Nature 2015). Jarno further explored these models to, amongst others, dissect the genetic alterations that are required for metastasis formation (Fumagalli & Drost et al., PNAS 2017) and to study mutational signatures in cancer (Drost & van Boxtel et al., Science 2017). Moreover, he was involved in establishing organoid cultures from primary prostate tissue (Karthaus et al., Cell 2014) and applied this protocol to establish organoids from metastatic prostate cancer lesions and circulating tumor cells (Drost et al., Nature Protocols 2016). His post-doctoral work was awarded a prestigious Veni career grant from the Netherlands Organization for Scientific Research (NWO) and the Dr. Patrick Hanlo Award for best post-doctoral researcher of the Hubrecht Institute.

In November 2016, Jarno started his independent research group at the Princess Máxima Center for Pediatric Oncology (Utrecht, the Netherlands). The Drost group studies the molecular alterations underpinning childhood solid tumorigenesis using representative pre-clinical model systems, including organoids and mouse models. His lab was the first in the world to apply organoid technology to pediatric tumors (Schutgens et al., Nature Biotechnology 2019). They have now developed culture conditions to grow organoid cultures with high efficiency from a broad spectrum of different childhood solid tumors (Calandrini et al., Nature Communications 2020; Calandrini et al., Cell Reports 2021; Meister et al., EMBO Molecular Medicine 2022; Paassen et al., Oncogene 2023). The Drost group has a strong interest in how derailed epigenetic gene regulation contributes to tumorigenesis (Liu, Paassen & Custers et al., Nature Communications 2023). They take a multidisciplinary approach by using their unique model systems in combination with (single-cell) multi-omics, CRISPR gene editing, and lineage tracing technologies to increase understanding of the origin of these tumors and to develop new (immune-) therapeutic strategies (e.g., Custers, Khabirova & Coorens et al., Nature Communications 2021; DeMartino, Meister & Visser et al., Nature Communications 2023).

For his research, Jarno received several awards such as the Bas Mulder Young Investigator Award from the Dutch Cancer Society, the very prestigious ERC Starting, ERC Consolidator, and NWO-Vidi grants, the Dutch virtual cancer institute “Oncode” membership, and the AACR St. Baldrick’s career development award for emerging leaders in the field of pediatric oncology.

Awards and Personal Grants

2024	European Research Council (ERC) Consolidator Grant <i>Prestigious European grant to support excellent Principal Investigators to consolidate their research lines</i>
2024	Foundation Children Cancerfree (KiKa) Research Grant <i>Grant funding 4 years of research on epigenetic rewiring in malignant rhabdoid tumors</i>
2024	Cancer Research Horizons CYP Therapeutic Catalyst grant
2024	Foundation Children Cancerfree (KiKa) Research Grant <i>Grant funding 4 years of research on synovial sarcomas</i>
2023	Twinning program Máxima-KiZ <i>Validation of immunotherapy targets in rhabdomyosarcoma – with A. Banito (KiZ Heidelberg)</i>
2023	Oncode Institute member <i>Selected to participate as senior Oncode Investigator</i>
2023	CoFund Butterfly consortium <i>Funded under the Marie Skłodowska-Curie Actions (MSCA)</i>
2023	Oncode Accelerator (National Growth Fund) <i>Program board member and co-lead of the Organoid platform</i>

- 2022 Twinning program Máxima-KiTZ
Drug sensitivity testing in Wilms tumor organoids – with N. Jaeger (KiTZ Heidelberg)
- 2022 Project “The Virtual Child” shortlisted in the CRUK Grand Challenges competition
- 2021 Twinning program Máxima-KiTZ
Molecular dissection of AT/RT – with M. Kool (KiTZ Heidelberg)
- 2021 Oncode Technology Development fund
“Validation of the MISC-seq technology in paediatric rhabdoid tumours”
- 2021 NWO-Vidi grant
Grant part of the Netherlands Organization for Scientific Research (NWO) Talent Program for experienced researchers performing innovative research
- 2021 Achieved tenure at Princess Máxima Center for Pediatric Oncology
- 2021 VAGABOND consortium: Validation of Actionable Genomic Aberrations in a paediatric Oncology Network for Doctorate students.
Funded under the Marie Skłodowska-Curie Actions (MSCA)
- 2021 Foundation Children Cancerfree (KiKa) Research Grant
Grant funding 4 years of research on metabolic vulnerabilities of childhood solid tumors
- 2020 AACR St. Baldrick’s career development award
Inaugural award for emerging leaders in the field of pediatric oncology
- 2019 European Research Council (ERC) Starting Grant
Prestigious European grant to support excellent junior Principal Investigators
- 2019 Foundation Children Cancerfree (KiKa) Pilot Grant
Grant funding 1,5 years of research on relapsed Wilms tumors
- 2019 Oncode Institute member
Selected to join Oncode Institute as junior Oncode Investigator
- 2018 Foundation Children Cancerfree (KiKa) Research Grant
Grant funding 4 years of research on rhabdoid tumors
- 2017 Foundation Children Cancerfree (KiKa) Research Grant
Grant funding 4 years of research on renal tumor organoid models
- 2017 Dr. Patrick Hanlo Award
Award for best post-doctoral researcher of the Hubrecht Institute
- 2016 Bas Mulder Award from the Dutch Cancer Society (KWF)
Prestigious national award for talented young researchers
- 2014 NWO-Veni grant
Grant part of the Netherlands Organization for Scientific Research (NWO) Talent Program for talented post-doctoral researchers

PhD Supervisor

- Present Aleksandra Nenova (expected graduation 2028)
Rugile Januskeviciute (expected graduation 2028)
Giulia Peticari (expected graduation 2028)
Carla Rios Arceo (expected graduation 2028)
Charlotte op ‘t Hoog (expected graduation 2027)
Jiayou He (expected graduation 2027)
Anastasia Spinou (expected graduation 2026)
Marjolein Kes (expected graduation 2025)
Maroussia Ganpat (expected graduation 2025)
Alissa Groenendijk (expected graduation 2025)
- Past (graduation date) Jeff DeMartino (14 Nov 2024), Irene Paassen (20 Sep 2024), Camilla Calandrini (25 Nov 2022), Lars Custers (15 Oct 2021), Ariadne Ooms (12 Nov 2019).

Selected Conferences and Presentations

- 2025 Institute for Research in Biomedicine (IRB Barcelona) seminar series “Barcelona Biomed Plenary Seminars”, Barcelona, Spain. **Invited speaker (upcoming).**
- 2024 Oncode Accelerator Summit, Amsterdam, the Netherlands. **Invited speaker.**

- 2024 Master course “Model organisms in cancer drug discovery and development”, Leiden University, Leiden, the Netherlands. **Invited speaker.**
- 2024 PEDIAC symposium “Pediatric cancers: from origins and causes to therapeutic perspectives”, Paris, France. **Invited speaker.**
- 2024 Paediatric Committee Strategic Review and Learning Meeting held under the Belgian Presidency 2024 of the Council of the European Union, Leuven, Belgium. **Invited speaker.**
- 2024 Medicines Evaluation Board (MEB) Science Day 2024, Utrecht, the Netherlands. **Invited speaker.**
- 2024 American Association for Cancer Research (AACR) Annual conference, San Diego, US. **Invited speaker.**
- 2024 Innovation for Health, Rotterdam, the Netherlands. **Invited speaker.**
- 2024 The Science of Childhood Cancers seminar series “Rising Stars of Cancer Research”, St. Jude Children’s Research Hospital, Memphis, US. **Invited speaker.**
- 2023 American Association for Cancer Research (AACR) Special conference on “Advances in Kidney Cancer Research”, Austin, US. **Invited speaker.**
- 2023 European Association for Cancer Research (EACR) Annual conference, Turin, Italy. **Invited speaker.**
- 2023 SMARCB1 Hope 2023 Symposium, Saint-Paul-de-Vence, France. **Invited speaker.**
- 2023 Master course “Model organisms in cancer drug discovery and development”, Leiden University, Leiden, the Netherlands. **Invited speaker.**
- 2023 Pediatric Grand Rounds seminar series, Memorial Sloan Kettering Cancer Center, New York, US. **Invited speaker.**
- 2023 Neurobiology and Brain Tumor Cancer Center Program seminar series, St. Jude Children’s Research Hospital, Memphis, US. **Invited speaker.**
- 2022 International seminar at the Cancer Research Center of Lyon, Lyon, France. **Invited speaker (virtual).**
- 2021 SIOP (International Society of Pediatric Oncology) - RTSG (Renal Tumor Study Group) annual meeting. **Invited speaker (virtual).**
- 2021 French Society of Immunotherapy, Paris, France. **Invited speaker (virtual).**
- 2021 Organoids: Advances and Applications 2021 conference. Wellcome Genome Campus Advanced Courses and Scientific Conferences, Hinxton, UK. **Invited speaker (virtual).**
- 2021 Applications of Organoid Technology Symposium. **Invited speaker (virtual).**
- 2020 International seminar at University of Ghent, Ghent, Belgium. **Invited speaker (virtual).**
- 2020 International seminar at Institut Curie, Paris, France. **Invited speaker.**
- 2019 Oncode – CGC Annual Conference “Fundamental Cancer Biology”, Amsterdam, the Netherlands. **Invited speaker.**
- 2019 German Cancer Consortium (DKTK) mini-retreat “Molecularly Targeted Therapy”, Frankfurt, Germany. **Invited speaker.**
- 2019 Société Internationale d’Oncologie Pédiatrique (SIOP) 2019 international congress, Lyon, France. **Invited Speaker.**
- 2019 American Association for Cancer Research (AACR) Special conference on “Advances in Pediatric Cancer Research”, Montreal, Canada. **Invited speaker.**
- 2019 Société Internationale d’Oncologie Pédiatrique (SIOP) Europe annual meeting, Prague, Czech Republic. **Invited speaker.**
- 2019 Comprehensive Cancer Center Developmental Biology and Solid Tumor Program, St. Jude Children’s Research Hospital, Memphis, US. **Invited speaker.**
- 2018 IRI Life Sciences Colloquium series “Organoids - Life in 3D”, Humboldt University, Berlin, Germany. **Invited speaker.**
- 2018 SIOP (International Society of Pediatric Oncology) - RTSG (Renal Tumor Study Group) Committee meeting, Copenhagen, Denmark. **Invited speaker.**
- 2018 Eurolife Summer School “Molecular Mechanisms in Cancer – Translating Discoveries into Personalized Therapies” Leids University Medical Center (LUMC), Leiden, the Netherlands. **Invited speaker.**
- 2018 International Rhabdoid Tumor Meeting. Lake Louise, Canada. **Selected speaker.**

- 2018 2nd Precision Cancer Medicine (PreCanMed) project meeting and workshop, Udine, Italy. **Invited speaker.**
- 2018 International seminar at PhD program in Molecular Biomedicine, University of Trieste, Trieste, Italy. **Invited speaker.**
- 2018 ITCC-P4 International Workshop “Improving pediatric oncology drug development through preclinical research”, Amsterdam, the Netherlands. **Invited speaker.**
- 2017 National Cancer Research Institute (NCRI) Cancer Conference, Liverpool, United Kingdom. **Invited speaker.**
- 2017 Organoid Workshop, Dresden, Germany. **Invited speaker.**
- 2017 26th meeting of the KWF society for Cancer Biology, Lunteren, the Netherlands. **Selected speaker.**
- 2016 CancerGenomiCs.nl annual scientific meeting, Utrecht, the Netherlands. **Invited speaker.**
- 2016 Young scientist meeting “Host-Microbial Interactions and Mucosal Immunity”, Bern, Switzerland. **Invited speaker.**
- 2016 PhD course “Cancer and Cancer Stem Cells” Karolinska Institutet, Stockholm, Sweden. **Invited speaker.**
- 2015 CancerGenomiCs.nl annual scientific meeting, Utrecht, the Netherlands. **Invited speaker.**
- 2015 Symposium Berlin Institute for Medical Systems Biology, Max Delbrück Center for Molecular Medicine, Berlin, Germany. **Invited speaker.**
- 2015 Seminar at the Netherlands Cancer Institute, Amsterdam, the Netherlands. **Invited speaker.**
- 2015 EMBO|EMBL Symposium “Frontiers in Stem Cells and Cancer”, Heidelberg, Germany. **Selected speaker.**

Reviewing Activities

- Advisory Board of Review Commons, which provides a new platform offering high-quality peer-review independent of journal submission.
- Reviewer for Nature, Nature Genetics, Nature Materials, Nature Methods, Nature Protocols, Nature Communications, Cancer Cell, Cell Reports, PNAS, Nature Reviews Cancer, EMBO Reports, European Journal of Cancer.
- Reviewer for multiple national and international funding organizations including KWF, NWO, European Research Council, Medical Research Council (UK), French National Cancer Institute (France), Swiss Cancer League (Switzerland), German Research Foundation DFG (Germany), Fight Kids Cancer.

Memberships of Scientific Boards and Societies

- 2024 – Paris Kids Cancer (PKC) center – Scientific Advisory Board
- 2023 – Oncode Accelerator (National Growth Fund) – Program Board
- 2022 – The Wilms Cancer Foundation – Advisory Board
- 2021 – ITCC Solid Tumor Committee
- 2019 – Société Internationale d'Oncologie Pédiatrique Europe (SIOPE) Atypical Teratoid Rhabdoid Tumor (ATRT) working group
- 2019 – SIOP Renal Tumor Study Group (RTSG) relapsed Wilms Tumor Committee
- 2018 – 2021 ITCC (Innovative Therapies for Children with Cancer in Europe) Biology group

Organization of Scientific Conferences and Workshops

- 2025 Oncode Annual Meeting (Amersfoort, the Netherlands). Scientific committee member (*upcoming*).
- 2023 Oncode Annual Conference (Amsterdam, the Netherlands). Scientific committee member.
- 2022 The 11th International Pediatric Renal Tumour Biology Conference (Marseille, France). Scientific committee member.
- 2022 Oncode Masterclass “Gene editing and its applications” (Utrecht, the Netherlands). Organizer, with Ruben van Boxtel.

- 2019 Oncode Masterclass “Gene editing and its applications” (Utrecht, the Netherlands). Organizer, with Ruben van Boxtel.

Examiner International PhD Theses

- 2017 Amanda Andersson Rolf, University of Cambridge, UK.

Publications

1. Kes, M.M.G.*, Morales-Rodriguez, F.*, Zaal, E.A., de Souza, T., Proost, N., van de Ven, M., van den Heuvel-Eibrink, M.M., Jansen, J.W.A., Berkers, C.R.#, **Drost, J.#**. Metabolic profiling of patient-derived organoids reveals nucleotide synthesis as a metabolic vulnerability in malignant rhabdoid tumors.
Cell Reports Medicine 2024 (in press).
2. Treger, T.D., Wegert, J., Wenger, A., Coorens, T.H.H., Al-Saadi, R., Kemps, P., Kennedy, J., Parks, C., Anderson, N.D., Hodder, A., Letunovska, A., Jung, H., Ogbonnah, T., Trinh, M., Lee-Six, H., Morcrette, G., van den Heuvel-Eibrink, M.M., **Drost, J.**, van Boxtel, R., Bertrums, E., Goemans, B.F., Antoniou, E., Reinhardt, D., Streitenberger, H., Ziegler, B., Bartram, J., Hutchinson, J.C., Vujanic, G., Vokuhl, C., Chowdhury, T., Furtwängler, R., Graf, N., Pritchard-Jones, K., Gessler, M., Behjati, S. Somatic development of Wilms tumour via normal kidneys in predisposed children.
Cancer Discovery 2024 (in press).
3. Mizutani, T., Boretto, M., Lim, S., **Drost, J.**, Gonzáles, D.M., Oka, R., Geurts, M.H., Begthel, H., Korving, J., van Es, J.H., van Boxtel, R., Clevers, H. Recapitulating the adenoma-carcinoma sequence by selection of four spontaneous oncogenic mutations in mismatch repair-deficient human colon organoids.
Nature Cancer 2024 Nov 1. doi: 10.1038/s43018-024-00841-x.
4. Van Belzen, I.A.E.M., van Tuil, M., Badloe, S., Janse, A., Verwiel, E.T.P., Santoso, M., de Vos, S., Baker-Hernandez, J., Kerstens, H.H.D., Solleveld-Westerink, N., Meister, M.T., **Drost, J.**, van den Heuvel-Eibrink, M.M., Merks, J.H.M., Molenaar, J.J., Peng, W.C., Tops, B.B.J., Holstege, F.C.P., Kemmeren, P., Hehir-Kwa, J.Y. Complex structural variation is prevalent and highly pathogenic in pediatric solid tumors.
Cell Genomics 2024 Oct 10. 100675. doi: 10.1016/j.xgen.2024.100675.
5. Kes, M.M.G., Berkers, C.R.#, **Drost, J.#**. Bridging the Gap: Advancing Cancer Cell Culture to Reveal Key Metabolic Targets.
Frontiers in Oncology 2024 Sep 17. doi: 10.3389/fonc.2024.1480613.
6. Al-Jilaihawi, S., Spreafico, F., Mavinkurve-Groothuis, A., **Drost, J.**, Perotti, D., Koenig, C., Brok, J. Bevacizumab-containing treatment for relapsed or refractory Wilms tumor.
Expert Review of Anticancer Therapy 2024 Jul 17. doi: 10.1080/14737140.2024.2381537.
7. De Munter, S., Buhl, J.L., De Cock, L., Van Parys, A., Daneels, W., Pascal, E., Deseins, L., Ingels, J., Goetgeluk, G., Jansen, H., Billiet, L., Pille, M., Van Duyse, J., Bonte, S., Vandamme, N., Van Dorpe, J., Offner, F., Leclercq, G., Taghon, T., Depla, E., Tavernier, J., Kerre, T., **Drost, J.**, Vandekerckhove, B. Knocking out CD70 rescues CD70-specific nanoCAR T-cells from antigen-induced exhaustion.
Cancer Immunology Research 2024 Jun 14. doi: 10.1158/2326-6066.CIR-23-0677.
8. Gilbertson, R.J., Behjati, S., Böttcher, A.L., Bronner, M.E., Burridge, M., Clausing, H., Clifford, H., Danaher, T., Donovan, L.K., **Drost, J.**, Eggermont, A.M.M., Emerson, C., Flores, M.G., Hamerlik, P., Jabado, N., Jones, A., Kaessmann, H., Kleinman, C.L., Kool, M., Kutscher, L.M., Lindberg, G., Linnane, E., Marioni, J.C., Maris, J.M., Monje, M., Macaskill, A., Niederer, S., Northcott, P.A., Peeters, E., Plieger-van Solkema, W., Preußner, L., Rios, A.C., Rippe, K., Sandford, P., Sgourakis, N.G., Shlien, A., Smith, P., Straathof, K., Sullivan, P.J., Suvà, M.L., Taylor, M.D., Thompson, E., Vento-Tormo, R., Wainwright, B.J., Wechsler-Reya, R.J., Westermann, F., Winslade, S., Al-Lazikani, B., Pfister, S.M. The Virtual Child.
Cancer Discovery 2024 Apr 4;14(4):663-668. doi: 10.1158/2159-8290.CD-23-1500.
9. Cornel, A.M., van der Sman, L., van Dinter, J.T., Arrabito, M., Dunnebach, E., van Hoesel, M., Kluiver, T.A., Lopes, A.P., Dautzenberg, N.M.M., Dekker, L., van Rijn, J.M., van den Beemt, D.A.M.H., Buhl, J.L., du Chatinier, A., Barneh, F., Lu, Y., Lo Nigro, L., Krippner-Heidenreich, A., Sebestyén, Z., Kuball, J., Hulleman, E., **Drost, J.**, van Heesch, S., Heidenreich, O.T., Peng, W.C.,

- Nierkens, S. Targeting pediatric cancers via T-cell recognition of the monomorphic MHC class I-related protein MR1.
Journal for ImmunoTherapy of Cancer 2024 Mar 21;12(3):e007538. doi: 10.1136/jitc-2023-007538.
10. Caipa Garcia, A.L., Kucab, J.E., Al-Serori, H., Beck, R.S.S., Bellamri, M., Turesky, R.J., Groopman, J.D., Francies, H.E., Garnett, M.J., Huch, M., **Drost, J.**, Zilbauer, M., Arlt, V.M., Phillips, D.H. Tissue Organoid Cultures Metabolize Dietary Carcinogens Proficiently and Are Effective Models for DNA Adduct Formation.
Chemical Research in Toxicology 2024 Jan 17; doi: 10.1021/acs.chemrestox.3c00255.
 11. Liu, N.*, Paassen, I.*, Custers, L.*, Zeller, P., Teunissen, H., Ayyildiz, D., He, J., Buhl, J.L., Hoving, E.W., van Oudenaarden, A., de Wit, E.#, **Drost, J.#**. SMARCB1 loss activates patient-specific distal oncogenic enhancers in malignant rhabdoid tumors.
Nature Communications 2023 Dec 1;14(1):7762. doi: 10.1038/s41467-023-43498-3.
 12. Lin, L., DeMartino, J., Wang, D., van Son, G.J.F., van der Linden, R., Begthel, H., Korving, J., Andersson-Rolf, A., van den Brink, S., Lopez-Iglesias, C., van de Wetering, W.J., Balwierz, A., Margaritis, T., van de Wetering, M., Peters, P.J., **Drost, J.**, van Es, J.H., Clevers, H. Unbiased transcription factor CRISPR screen identifies ZNF800 as master repressor of enteroendocrine differentiation.
Science 2023 Oct 27;382(6669):451-458. doi: 10.1126/science.adi2246.
 13. Perotti, D., Williams, R.D., Wegert, J., Brzezinski, J., Maschietto, M., Ciceri, S., Gisselsson, D., Gadd, S., Walz, A.L., Furtwaengler, R., **Drost, J.**, Al-Saadi, R., Evageliou, N., Gooskens, S.L., Hong, A.L., Murphy, A.J., Ortiz, M.V., O'Sullivan, M.J., Mullen, E.A., van den Heuvel-Eibrink, M.M., Fernandez, C.V., Graf, N., Grundy, P.E., Geller, J.I., Dome, J.S., Perlman, E.J., Gessler, M., Huff, V., Pritchard-Jones, K. Hallmark discoveries in the biology of Wilms tumour.
Nature Reviews Urology 2023 Oct 17; doi: 10.1038/s41585-023-00824-0.
 14. Schneider, P., Wander, P., Arentsen-Peters, S.T.C.J.M., Vrenken, K.S., Rockx-Brouwer, D., Adriaanse, F.R.S., Hoeve, V., Paassen, I., **Drost, J.**, Pieters, R., Stam, R.W. CRISPR-Cas9 Library Screening Identifies Novel Molecular Vulnerabilities in KMT2A-Rearranged Acute Lymphoblastic Leukemia.
International Journal of Molecular Sciences 2023 Aug 25;24(17):13207. doi: 10.3390/ijms241713207.
 15. Heim, C., Moser, L.M., Kreyenberg, H., Bonig, H.B., Tonn, T., Wels, W.S., Gradhand, E., Ullrich, E., Meister, M.T., Koerkamp, M.G., Holstege, F.C.P., **Drost, J.**, Klusmann, J.H., Bader, P., Merker, M., Rettinger, E. ErbB2 (HER2)-CAR-NK-92 cells for enhanced immunotherapy of metastatic fusion-driven alveolar rhabdomyosarcoma.
Frontiers in Immunology 2023 Aug 18; 14:1228894. doi: 10.3389/fimmu.2023.1228894.
 16. van Belzen, I.A.E.M., Cai, C., van Tuil, M., Badloe, S., Strengman, E., Janse, A., Verwiel, E.T.P., van der Leest, D.F.M., Kester, L., Molenaar, J.J., Meijerink, J., **Drost, J.**, Peng, W.C., Kerstens, H.H.D., Tops, B.B.J., Holstege, F.C.P., Kemmeren, P., Hehir-Kwa, J.Y. Systematic discovery of gene fusions in pediatric cancer by integrating RNA-seq and WGS.
BMC Cancer 2023 Jul 3;23(1):618. doi: 10.1186/s12885-023-11054-3.
 17. DeMartino, J.*, Meister, M.T.*, Visser, L.*, Brok, M., Groot Koerkamp M.J.A., Wezenaar A.K.L., Hiemcke-Jiwa, L.S., de Souza, T., Merks, J.H.M., Rios, A.C., Holstege, F.C.P., Margaritis, T.#, **Drost, J.#**. Single-cell transcriptomics reveals immune suppression and cell states predictive of patient outcomes in rhabdomyosarcoma.
Nature Communications 2023 May 27;14(1):3074. doi: 10.1038/s41467-023-38886-8.
 18. Sell, T., Klotz, C., Fischer, M.M., Astaburuaga-García, R., Krug, S., **Drost, J.**, Clevers, H., Sers, C., Morkel, M., Blüthgen, N. Oncogenic signaling is coupled to colorectal cancer cell differentiation state.
Journal of Cell Biology 2023 Jun 5;222(6):e202204001. doi: 10.1083/jcb.202204001.
 19. Paassen, I., Williams, J., Rios Arceo, C., Ringnalda, F., Mercer, K.S., Buhl, J.L., Moreno, N., Federico, A., Franke, N.E., Kranendonk, M., Upadhyaya, S.A., Kerl, K., van de Wetering, M., Clevers, H., Kool, M., Hoving, E.W., Roussel, M.F.#, **Drost, J.#**. Atypical teratoid/rhabdoid tumoroids reveal subgroup-specific drug vulnerabilities.
Oncogene 2023 Apr 5. doi: 10.1038/s41388-023-02681-y.

20. Bánki, T., **Drost, J.**, van den Heuvel-Eibrink, M.M., Mavinkurve-Groothuis, A.M.C., de Krijger, R.R. Somatic, Genetic and Epigenetic Changes in Nephrogenic Rests and Their Role in the Transformation to Wilms Tumors, a Systematic Review. *Cancers* 2023 Feb 21;15(5):1363. doi: 10.3390/cancers15051363.
21. Caipa Garcia, A.L., Kucab, J.E., Al-Serori, H., Beck, R.S.S., Fischer, F., Hufnagel, M., Hartwig, A., Floeder, A., Balbo, S., Francies, H., Garnett, M., Huch, M., **Drost, J.**, Zilbauer, M., Arlt, V.M., Phillips, D.H. Metabolic Activation of Benzo[a]pyrene by Human Tissue Organoid Cultures. *International Journal of Molecular Sciences* 2022 Dec 29;24(1):606. doi: 10.3390/ijms24010606.
22. Hont, A.B., Dumont, B., Sutton, K.S., Anderson, J., Kentsis, A., **Drost, J.**, Hong, A.L., Verschuur, A. The tumor microenvironment and immune targeting therapy in pediatric renal tumors. *Pediatric Blood & Cancer* 2022 Nov 30;e30110. doi: 10.1002/pbc.30110.
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Patents

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