

Stanford



David Krist, MD, PhD

- Affiliate, Department Funds
- Resident in Surgery

Bio

BIO

MD, Carle Illinois College of Medicine (2024)

PhD, Chemistry, Northwestern University (2016)

CLINICAL FOCUS

- Residency

HONORS AND AWARDS

- King Li, MD, MBA Physician Innovator Award, Carle Illinois College of Medicine (2024)

Research & Scholarship

CURRENT CLINICAL INTERESTS

- General Surgery
- Surgical Oncology

Publications

PUBLICATIONS

- **Evaluating the impact of donor obesity on liver transplantation outcomes: the role of donor gender and age.** *HPB : the official journal of the International Hepato Pancreato Biliary Association*
Nakayama, T., Krist, D. T., Akabane, M., Imaoka, Y., Esquivel, C. O., Melcher, M. L., Sasaki, K.
2026
- **Hepatitis C-positive grafts for hepatitis C-negative recipients in liver transplantation: Buried treasure or depleting resource?** *Liver transplantation : official publication of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society*
Nakayama, T., Krist, D. T., Akabane, M., Imaoka, Y., Esquivel, C. O., Kwong, A. J., Kwo, P. Y., Melcher, M. L., Sasaki, K.
2024
- **AI is a viable alternative to high throughput screening: a 318-target study** *SCIENTIFIC REPORTS*
Wallach, I., Bernard, D., Nguyen, K., Ho, G., Morrison, A., Stecula, A., Rosnik, A., O'Sullivan, A., Davtyan, A., Samudio, B., Thomas, B., Worley, B., Butler, et al
2024; 14 (1): 7526
- **Mechanism of millisecond Lys48-linked poly-ubiquitin chain formation by cullin-RING ligases.** *Nature structural & molecular biology*
Liwocha, J., Li, J., Purser, N., Rattanasopa, C., Maiwald, S., Krist, D. T., Scott, D. C., Steigenberger, B., Prabu, J. R., Schulman, B. A., Kleiger, G.
2024; 31 (2): 378-389

- **Trends in Technology for Pedicle Screw Placement A Temporal Meta-Analysis** *SPINE*
Naik, A., MacInnis, B. R. R., Shaffer, A., Krist, D. T. T., Smith, A. D. D., Garst, J. R. R., Hassaneen, W., Arnold, P. M. M.
2023; 48 (11): 791-799
- **A Novel Pathway for Biosynthesis of the Herbicidal Phosphonate Natural Product Phosphonothrixin Is Widespread in Actinobacteria** *JOURNAL OF BACTERIOLOGY*
Bown, L., Hirota, R., Goettge, M. N., Cui, J., Krist, D. T., Zhu, L., Giurgiu, C., van der Donk, W. A., Ju, K., Metcalf, W. W.
2023; 205 (5): e0048522
- **Differentiating radiation necrosis from tumor recurrence: a systematic review and diagnostic meta-analysis comparing imaging modalities** *JOURNAL OF NEURO-ONCOLOGY*
Smith, E. J. J., Naik, A., Shaffer, A., Goel, M., Krist, D. T. T., Liang, E., Furey, C. G. G., Miller, W. K. K., Lawton, M. T. T., Barnett, D. H. H., Weis, B., Rizk, A., Smith, et al
2023; 162 (1): 15-23
- **Anterior versus Posterior Ventricular Catheter Placement in Pediatric Patients: A Systematic Review and Meta-Analysis** *WORLD NEUROSURGERY*
Naik, A., Ramsy, N., Krist, D. T., Taha, B., Dharnipragada, R., Khanam, R., Sandoval-Garcia, C., Hassaneen, W., Tyler-Kabara, E. C., Arnold, P. M.
2022; 167: E10-E18
- **Letter to the Editor: Neurosurgical Conferences Should Be Free for Medical Students: A Call to Action** *WORLD NEUROSURGERY*
Naik, A., Krist, D. T., Merrill, S. A., Shlobin, N. A.
2022; 161: 213
- **Management of brain metastasis. Surgical resection versus stereotactic radiotherapy: a meta-analysis.** *Neuro-oncology advances*
Krist, D. T., Naik, A., Thompson, C. M., Kwok, S. S., Janbahan, M., Olivero, W. C., Hassaneen, W.
2022; 4 (1): vdac033
- **Comparison of fluorescein sodium, 5-ALA, and intraoperative MRI for resection of high-grade gliomas: A systematic review and network meta-analysis** *JOURNAL OF CLINICAL NEUROSCIENCE*
Naik, A., Smith, E. J., Barreau, A., Nyaeme, M., Cramer, S. W., Najafali, D., Krist, D. T., Arnold, P. M., Hassaneen, W.
2022; 98: 240-247
- **Evaluating robotic pedicle screw placement against conventional modalities: a systematic review and network meta-analysis** *NEUROSURGICAL FOCUS*
Naik, A., Smith, A. D., Shaffer, A., Krist, D. T., Moawad, C. M., MacInnis, B. R., Teal, K., Hassaneen, W., Arnold, P. M.
2022; 52 (1): E10
- **Robotic external ventricular drain placement for acute neurosurgical care in low-resource settings: feasibility considerations and a prototype design** *NEUROSURGICAL FOCUS*
Smith, A. D., Teague, A. J., Naik, A., Janbahan, M., Smith, E. J., Krist, D. T., Parupalli, S., Teal, K., Hassaneen, W.
2022; 52 (1): E14
- **Linkage-specific ubiquitin chain formation depends on a lysine hydrocarbon ruler.** *Nature chemical biology*
Liwocha, J., Krist, D. T., van der Heden van Noort, G. J., Hansen, F. M., Truong, V. H., Karayel, O., Purser, N., Houston, D., Burton, N., Bostock, M. J., Sattler, M., Mann, M., Harrison, et al
2021; 17 (3): 272-279
- **Ubiquitin ligation to F-box protein targets by SCF-RBR E3-E3 super-assembly.** *Nature*
Horn-Ghetko, D., Krist, D. T., Prabu, J. R., Baek, K., Mulder, M. P., Klügel, M., Scott, D. C., Ovaa, H., Kleiger, G., Schulman, B. A.
2021; 590 (7847): 671-676
- **NEDD8 nucleates a multivalent cullin-RING-UBE2D ubiquitin ligation assembly.** *Nature*
Baek, K., Krist, D. T., Prabu, J. R., Hill, S., Klügel, M., Neumaier, L. M., von Gronau, S., Kleiger, G., Schulman, B. A.
2020; 578 (7795): 461-466
- **Mapping low-affinity/high-specificity peptide-protein interactions using ligand-footprinting mass spectrometry.** *Proceedings of the National Academy of Sciences of the United States of America*
Parker, B. W., Goncz, E. J., Krist, D. T., Statsyuk, A. V., Nesvizhskii, A. I., Weiss, E. L.
2019; 116 (42): 21001-21011

- **UbMES and UbFluor: Novel probes for ring-between-ring (RBR) E3 ubiquitin ligase PARKIN** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Park, S., Foote, P. K., Krist, D. T., Rice, S. E., Statsyuk, A. V.
2017; 292 (40): 16539-16553
- **UbFluor: A Fluorescent Thioester to Monitor HECT E3 Ligase Catalysis.** *Current protocols in chemical biology*
Krist, D. T., Foote, P. K., Statsyuk, A. V.
2017; 9 (1): 11-37
- **UbFluor: A Mechanism-Based Probe for HECT E3 Ligases.** *Chemical science*
Krist, D. T., Park, S., Boneh, G. H., Rice, S. E., Statsyuk, A. V.
2016; 7 (8): 5587-5595
- **UbFluor: a mechanism-based probe for HECT E3 ligases** *CHEMICAL SCIENCE*
Krist, D. T., Park, S., Boneh, G. H., Rice, S. E., Statsyuk, A. V.
2016; 7 (8): 5587-5595
- **Catalytically Important Residues of E6AP Ubiquitin Ligase Identified Using Acid-Cleavable Photo-Cross-Linkers.** *Biochemistry*
Krist, D. T., Statsyuk, A. V.
2015; 54 (29): 4411-4
- **Protein ubiquitination and formation of polyubiquitin chains without ATP, E1 and E2 enzymes** *CHEMICAL SCIENCE*
Park, S., Krist, D. T., Statsyuk, A. V.
2015; 6 (3): 1770-1779
- **Crosstalk between kinases and Nedd4 family ubiquitin ligases.** *Molecular bioSystems*
An, H., Krist, D. T., Statsyuk, A. V.
2014; 10 (7): 1643-57