ZE5 Cell Analyzer

High-Impact Publications, 2023–2024

Screening and Drug Discovery

Crees ZD et al. (2023).
Motixafortide and G-CSF to mobilize hematopoietic stem cells for autologous transplantation in multiple myeloma: A randomized phase 3 trial.
Nat Med 29, 869–879.

French JD et al. (2024).
Combination targeted therapy with pembrolizumab and lenvatinib in progressive, radioiodine-refractory differentiated thyroid cancers.
Clin Cancer Res 30, 3757–3767.

Han K et al. (2024).
Inulin-gel-based oral immunotherapy remodels the small intestinal microbiome and suppresses food allergy.
Nat Mater 23, 1444–1455.

Kohashi H et al. (2024).
A novel transient receptor potential C3/C6 selective activator induces the cellular uptake of antisense oligonucleotides.
Nucleic Acids Res 52, 4784–4798.

Lui L et al. (2024).
Discovery of a potent PROTAC degrader for RNA demethylase FTO as antileukemic therapy.
Acta Pharm Sin B 14, 5382–5392.

Makowski EK et al. (2024).
Optimization of therapeutic antibodies for reduced self-association and non-specific binding via interpretable machine learning.
Nat Biomed Eng 8, 45–56.

Momont C et al. (2023).
A pan-influenza antibody inhibiting neuraminidase via receptor mimicry.
Nature 618, 590–597.

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Schoenfeld AJ et al. (2024).
Lifileucel, an autologous tumor-infiltrating lymphocyte monotherapy, in patients with advanced non-small cell lung cancer resistant to immune checkpoint inhibitors.
Cancer Discov 14, 1389–1402.

Sun X et al. (2024).
Self-assembled STING-activating coordination nanoparticles for cancer immunotherapy and vaccine applications.
ACS Nano 18, 10439–10453.

Tavakol DN et al. (2023).
Modeling and countering the effects of cosmic radiation using bioengineered human tissues.
Biomaterials 301, 122267.

Vázquez Torres S et al. (2024).
De novo design of high-affinity binders of bioactive helical peptides.
Nature 626, 435–442.

Wang BZ et al. (2023).
Engineered cardiac tissue model of restrictive cardiomyopathy for drug discovery.
Cell Rep Med 4, 100976.

Yang JL et al. (2024).
Directed evolution of genetically encoded LYTACs for cell-mediated delivery.
Proc Natl Acad Sci USA 121, e2320053121.

Infectious Disease

Addetia A et al. (2023).
Neutralization, effector function and immune imprinting of Omicron variants.
Nature 621, 592–601.

Blattman SB et al. (2024).
Identification and genetic dissection of convergent persister cell states.
Nature 636, 438–446.

Debie Y et al. (2023).
Humoral and cellular immune responses against SARS-CoV-2 after third dose BNT162b2 following double-dose vaccination with BNT162b2 versus ChAdOx1 in patients with cancer.
Clin Cancer Res 29, 635–646.

Panda S et al. (2024).
Identification of differentially recognized T cell epitopes in the spectrum of tuberculosis infection.
Nat Commun 15, 765.

Tarke A et al. (2023).
Targets and cross-reactivity of human T cell recognition of common cold coronaviruses.
Cell Rep Med 4, 101088.

Williams MR et al. (2023).
Staphylococcus epidermidis activates keratinocyte cytokine expression and promotes skin inflammation through the production of phenol-soluble modulins.
Cell Rep 42, 113024.

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Cancer Research

Bushnell GG et al. (2024).
Natural killer cell regulation of breast cancer stem cells mediates metastatic dormancy.
Cancer Res 84, 3337–3353.

Chaib M et al. (2023).
Protein kinase C delta regulates mononuclear phagocytes and hinders response to immunotherapy in cancer.
Sci Adv 9, eadd3231.

Chotiwan N et al. (2023).
Type I interferon shapes brain distribution and tropism of tick-borne flavivirus.
Nat Commun 14, 2007.

Jang HJ et al. (2023).
Dual receptor T cells mediate effective antitumor immune responses via increased recognition of tumor antigens.
J Immunother Cancer 11, e006472.

Merlotti A et al. (2023).
Noncanonical splicing junctions between exons and transposable elements represent a source of immunogenic recurrent neo-antigens in patients with lung cancer.
Sci Immunol 8, eabm6359.

Ng KW et al. (2023).
Antibodies against endogenous retroviruses promote lung cancer immunotherapy.
Nature 616, 563–573.

Stanford SM et al. (2024).
Targeting prostate tumor low-molecular weight tyrosine phosphatase for oxidation-sensitizing therapy.
Sci Adv 10, eadg7887.

Wang J et al. (2023).
A synthetic metastatic niche reveals antitumor neutrophils drive breast cancer metastatic dormancy in the lungs.
Nat Commun 14, 4790.

Wang Z et al. (2024).
Identification of rocaglate acyl sulfamides as selective inhibitors of glioblastoma stem cells.
ACS Cent Sci 10, 1640–1656.

Zhang Q et al. (2024).
Reciprocal interactions between malignant cells and macrophages enhance cancer stemness and M2 polarization in HBV-associated hepatocellular carcinoma.
Theranostics 14, 892–910.

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Stem Cell Research

Benedum J et al. (2023).
The SPOC proteins DIDO3 and PHF3 co-regulate gene expression and neuronal differentiation.
Nat Commun 14, 7912.

Kang YA et al. (2023).
Secretory MPP3 reinforce myeloid differentiation trajectory and amplify myeloid cell production.
J Exp Med 220, e20230088.

Ruoss S et al. (2024).
Comparative single-cell transcriptional and proteomic atlas of clinical-grade injectable mesenchymal source tissues.
Sci Adv 10, eadn2831.

Ryan CW et al. (2024).
RING1 missense variants reveal sensitivity of DNA damage repair to H2A monoubiquitination dosage during neurogenesis.
Nat Commun 15, 7931.

Schulz M et al. (2024).
DNA methylation restricts coordinated germline and neural fates in embryonic stem cell differentiation.
Nat Struct Mol Biol 31, 102–114.

Urbanus J et al. (2023).
DRAG in situ barcoding reveals an increased number of HSPCs contributing to myelopoiesis with age.
Nat Commun 14, 2184.

Immunology

Bugaut H et al. (2024).
A conserved transcriptional program for MAIT cells across mammalian evolution.
J Exp Med 221, e20231487.

Chen YH et al. (2023).
Rewilding of laboratory mice enhances granulopoiesis and immunity through intestinal fungal colonization.
Sci Immunol 8, eadd6910.

Harwood MC et al. (2023).
HPV is a cargo for the COPI sorting complex during virus entry.
Sci Adv 9, eadc9830.

Mitchell CA et al. (2023).
Stromal niche inflammation mediated by IL-1 signalling is a targetable driver of haematopoietic ageing.
Nat Cell Biol 25, 30–41.

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Rankin LC et al. (2023).
Dietary tryptophan deficiency promotes gut RORγt^{+} Treg cells at the expense of Gata3^{+} Treg cells and alters commensal microbiota metabolism.
Cell Rep 42, 112135.

Yang D et al. (2024).
UBR5 promotes antiviral immunity by disengaging the transcriptional brake on RIG-I like receptors.
Nat Commun 15, 780.

Yeung ST et al. (2023).
CD169+ macrophage intrinsic IL-10 production regulates immune homeostasis during sepsis.
Cell Rep 42, 112171.

Metabolism and Molecular Biology

DelRosso N et al. (2023).
Large-scale mapping and mutagenesis of human transcriptional effector domains.
Nature 616, 365–372.

Elcocks H et al. (2023).
FBXL4 ubiquitin ligase deficiency promotes mitophagy by elevating NIX levels.
EMBO J 42, e112799.

Hanna DA et al. (2024).
H_2S preconditioning induces long-lived perturbations in O_2 metabolism.
Proc Natl Acad Sci USA 121, e2319473121.

Kesner JS et al. (2023).
Noncoding translation mitigation.
Nature 617, 395–402.

Lee N et al. (2024).
Selenium reduction of ubiquinone via SQOR suppresses ferroptosis.
Nat Metab 6, 343–358.

Lindsay MR et al. (2024).
Species-resolved, single-cell respiration rates reveal dominance of sulfate reduction in a deep continental subsurface ecosystem.
Proc Natl Acad Sci USA 121, e2309636121.

Wang YJ et al. (2023).
Imaging of *Escherichia coli* K5 and glycosaminoglycan precursors via targeted metabolic labeling of capsular polysaccharides in bacteria.
Sci Adv 9, eade4770.

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