UPDATE FROM MATRIX

Welcome to the June 2026 newsletter

MATRIX, the Norwegian Centre for Clinical Cancer Research, officially opened in August 2022. News and events are published on the MATRIX website regularly. In addition, we send out quarterly newsletters. If you would like to share any updates, such as publications or funding news, or would like to be added to the subscriber list, please contact Nina Ånensen.

TONJE LUNDEBY APPOINTED NEW DEPUTY DIRECTOR OF MATRIX



Tonje Lundeby is the new deputy director of MATRIX. She replaces Stein Kaasa who has served in the role since MATRIX was launched in 2022.

Tonje is a researcher at the Department of Oncology at Oslo University Hospital. She brings more than 15 years of experience in health services research, implementation research, and research in patient-centred cancer care.

We wish Tonje welcome to the MATRIX leadership team!

Learn more >

NEW MASTER LEVEL COURSE IN CLINICAL TRIALS AT OSLOMET

Clinical Trials for Healthcare Professionals - Planning and Conduct (MAFAR5000) is a new course that will be offered at OsloMet for the first time in the fall semester. The course is now open for registration with a deadline for applications on August 1st.

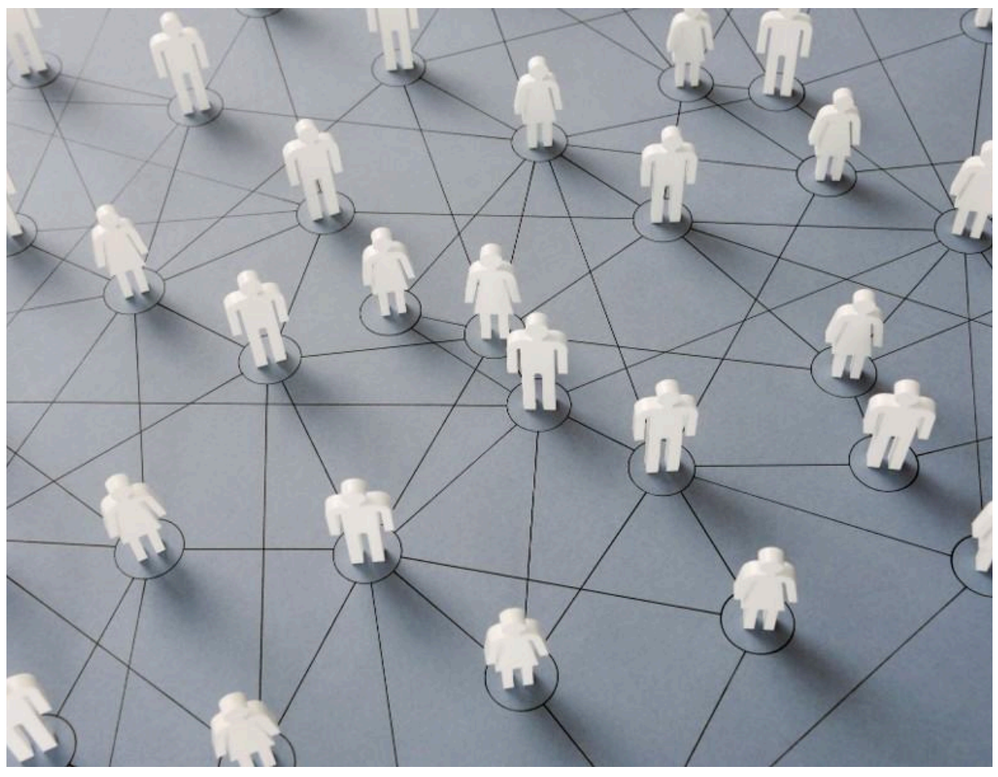
The course gives 10 ECTS and aims to provide healthcare professionals with practical and formal competence to contribute more actively to the planning and execution of clinical trials.

Learn more >

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REGISTER FOR OUR JOINT MEETINGS IN MATRIX WP2 AND WP4



MATRIX aims to increase the number of available clinical trials for patients with cancers that are difficult to cure (WP2), while also establishing a "Clinical Trial Engine (CTE)" (WP4) to contribute to more efficient initiation of clinical trials, increased expertise in clinical research, and a network for clinical trials in Norway.

Twice each semester, we hold national meetings across the two work packages to discuss relevant topics, present research results, and provide a platform for shared dialogue.

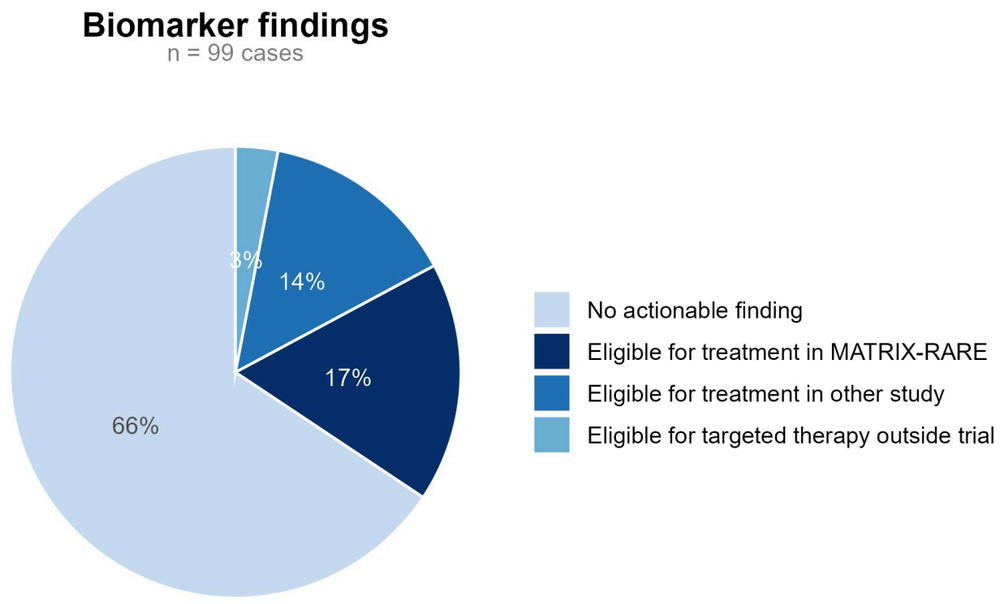
The meetings are digital and everyone interested is welcome to participate.

Please register your name and email in “Nettskjema” (see link below) to receive calendar invitations.

The next meeting is scheduled on September 23rd.

Register >

UPDATE FROM THE MATRIX-RARE TRIAL



The MATRIX-RARE trial is expanding, with increasing patient inclusion and more centres now offering treatment. The trial investigates how personalized cancer treatment can be implemented earlier in the course of the disease for patients with rare cancers.

As of June 2026, 148 patients have been screened. Of these, 17 have a biomarker enabling treatment in the trial, and 8 have started treatment. In addition, several patients have been offered treatment through other trials or off-label treatment based on identified biomarkers.

In total, about 34% of the screened patients have had relevant molecular findings, highlighting the potential for more targeted treatment in this patient group. The trial now includes 17 hospitals across all health regions, with 11 active recruiting sites.

The distribution of tumour groups among included patients shows a wide range of diagnoses, with the largest proportions being high-grade CNS tumours (30%) and gastrointestinal cancer (22%).

MATRIX-RARE contributes to strengthening the availability of precision medicine for patients with rare cancers in Norway.

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UNDERWAY ASSESSMENT OF MATRIX

MATRIX
NORWEGIAN CENTRE FOR CLINICAL CANCER RESEARCH

This spring, the Research Council of Norway (RCN) has conducted an underway assessment of MATRIX. The purpose is to assess the centre's activities in relation to our objectives and the success criteria for the centre scheme as established by the RCN.

In May, the centre met with the expert panel appointed by the RCN and had a fruitful discussion about our achievements so far. Key researchers at both the host institution and partner institutions, as well as three PhD-students, participated in the meeting.

We are now looking forward to the evaluation report from the panel and welcome any feedback and recommendations they will provide.

The RCN is expected to conclude the assessment in September.

INNOVATION FUNDING FROM UiO TO JON AMUND KYTE



The University of Oslo has granted innovation funding to Jon Amund Kyte. He receives funding for the test and further development phase of a CAR-T–delivered BiTE platform targeting tumour heterogeneity.

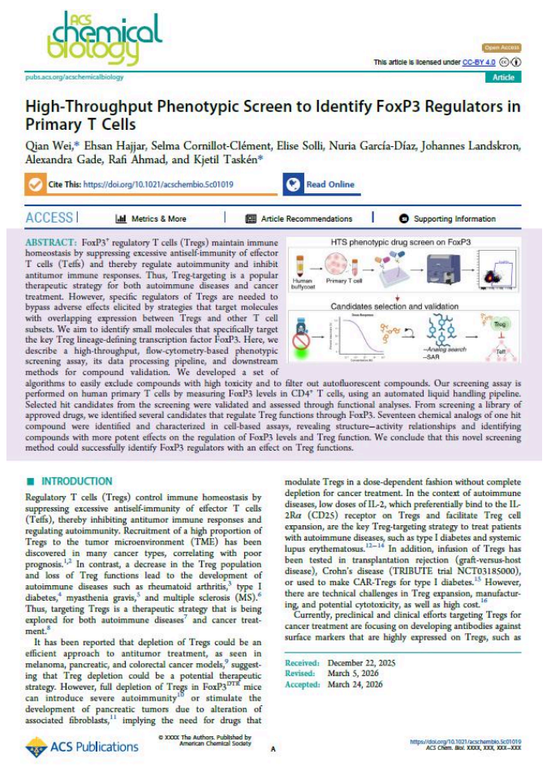
We congratulate Jon Amund!

Learn more >

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NEW PUBLICATION IN ACS CHEMICAL BIOLOGY JOURNAL


ACS chemical biology

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pubs.acs.org/acschemicalbiology

Article

High-Throughput Phenotypic Screen to Identify FoxP3 Regulators in Primary T Cells

Qian Wei,* Ehsan Hajjar, Selma Cornillot-Clément, Elise Solli, Nuria García-Díaz, Johannes Landskron, Alexandra Gade, Rafi Ahmad, and Kjetil Taskén*

Cite This: https://doi.org/10.1021/acschembio.5c01019 | Read Online

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ABSTRACT: FoxP3+ regulatory T cells (Tregs) maintain immune homeostasis by suppressing excessive antiself-immunity of effector T cells (Tefs) and thereby regulate autoimmunity and inhibit antitumor immune responses. Thus, Treg-targeting is a popular therapeutic strategy for both autoimmune diseases and cancer treatment. However, specific regulators of Tregs are needed to bypass adverse effects elicited by strategies that target molecules with overlapping expression between Tregs and other T cell subsets. We aim to identify small molecules that specifically target the key Treg lineage-defining transcription factor FoxP3. Here, we describe a high-throughput, flow-cytometry-based phenotypic screening assay, its data processing pipeline, and downstream methods for compound validation. We developed a set of algorithms to easily exclude compounds with high toxicity and to filter out autofluorescent compounds. Our screening assay is performed on human primary T cells by measuring FoxP3 levels in CD4+ T cells, using an automated liquid handling pipeline. Selected hit candidates from the screening were validated and assessed through functional analyses. From screening a library of approved drugs, we identified several candidates that regulate Treg functions through FoxP3. Seventeen chemical analogs of one hit compound were identified and characterized in cell-based assays, revealing structure−activity relationships and identifying compounds with more potent effects on the regulation of FoxP3 levels and Treg function. We conclude that this novel screening method could successfully identify FoxP3 regulators with an effect on Treg functions.

■ INTRODUCTION

Regulatory T cells (Treg) control immune homeostasis by suppressing excessive antiself-immunity of effector T cells (Tefs), thereby inhibiting antitumor immune responses and regulating autoimmunity. Recruitment of a high proportion of Tregs to the tumor microenvironment (TME) has been discovered in many cancer types, correlating with poor prognosis.[1,2] In contrast, a decrease in the Treg population and loss of Treg functions lead to the development of autoimmune diseases such as rheumatoid arthritis,[3] type I diabetes,[4] myasthenia gravis,[5] and multiple sclerosis (MS).[6] Thus, targeting Tregs is a therapeutic strategy that is being explored for both autoimmune diseases[7] and cancer treatment.[8]

It has been reported that depletion of Tregs could be an efficient approach to antitumor treatment, as seen in melanoma, pancreatic, and colorectal cancer models,[9] suggesting that Treg depletion could be a potential therapeutic strategy. However, full depletion of Tregs in FoxP3^{DTR} mice can introduce severe autoimmunity[10] or stimulate the development of pancreatic tumors due to alteration of associated fibroblasts,[11] implying the need for drugs that modulate Tregs in a dose-dependent fashion without complete depletion for cancer treatment. In the context of autoimmune diseases, low doses of IL-2, which preferentially bind to the IL-2Rα (CD25) receptor on Tregs and facilitate Treg cell expansion, are the key Treg-targeting strategy to treat patients with autoimmune diseases, such as type I diabetes and systemic lupus erythematosus.[12−14] In addition, infusion of Tregs has been tested in transplantation rejection (graft-versus-host disease), Crohn's disease (TRIBUTE trial NCT03185000), or used to make CAR-Tregs for type I diabetes.[15] However, there are technical challenges in Treg expansion, manufacturing, and potential cytotoxicity, as well as high cost.[16]

Currently, preclinical and clinical efforts targeting Tregs for cancer treatment are focusing on developing antibodies against surface markers that are highly expressed on Tregs, such as

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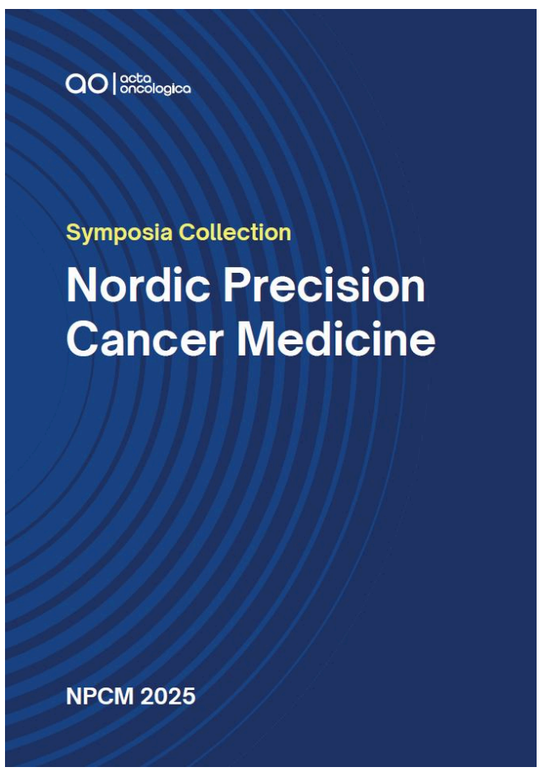
Qian Wei, researcher in MATRIX, and her colleagues recently published a new article presenting an automated, high-throughput method for identifying small molecules that selectively regulate regulatory T cells (Tregs), a critical cell type that controls immune system balance.

The screening method may contribute to the development of more precise immunotherapies for cancer and autoimmune diseases.

The paper "High-Throughput Phenotypic Screen to Identify FoxP3 Regulators in Primary T Cells" was published in the ACS Chemical Biology Journal.

Learn more >

ARTICLE COLLECTION FROM THE NPCM 2025 SYMPOSIUM



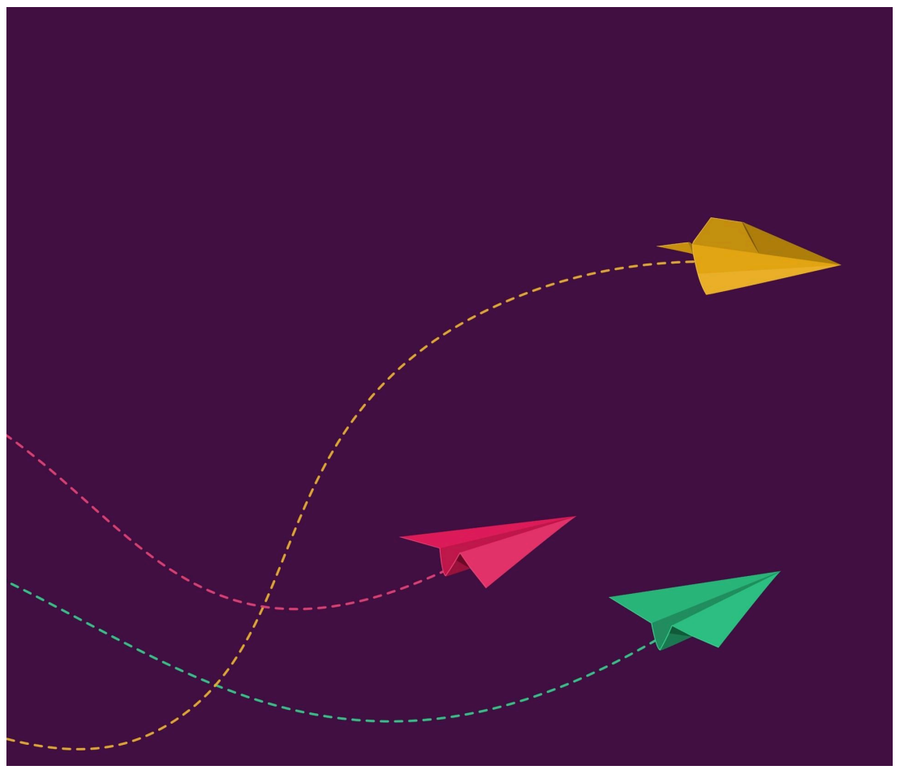
The second ACTA Oncologica Nordic Precision Cancer Medicine Symposium took place in Oslo in September 2025 with the topic Merging Clinical Research and Standard Healthcare.

A special issue of Acta Oncologica is now available, presenting papers originating from the symposium. Topics include data-sharing procedures in the Cancer Mission project PRIME-ROSE; a conceptual health economic modelling framework for assessing the cost-effectiveness of molecularly targeted treatment regimens in oncology; clinical outcomes of genomically guided trametinib monotherapy across cancer types: results from IMPRESS-Norway; targeted treatment of lung cancer in Iceland during the period 2010–2023; cross-border data standardization in PRIME-ROSE using the OMOP model; and the national DRUP-like study in Sweden: FOCU.SE.

The Nordic Precision Cancer Medicine Symposium will return to Oslo 29.-30. September 2027 – more information will be available soon, but save the date!

Learn more >

SUPPORT FOR RESEARCHER INITIATED TRIALS



It is still possible to apply for support from MATRIX to researcher-initiated trials involving MATRIX partners.

Principle investigators affiliated with MATRIX partner institutions can register their trials in an online form (see link below) in order to request support.

Registration form >

WISHING EVERYONE A GOOD SUMMER!



We wish you all a relaxing and enjoyable summer. Thank you for your continued engagement in MATRIX!