

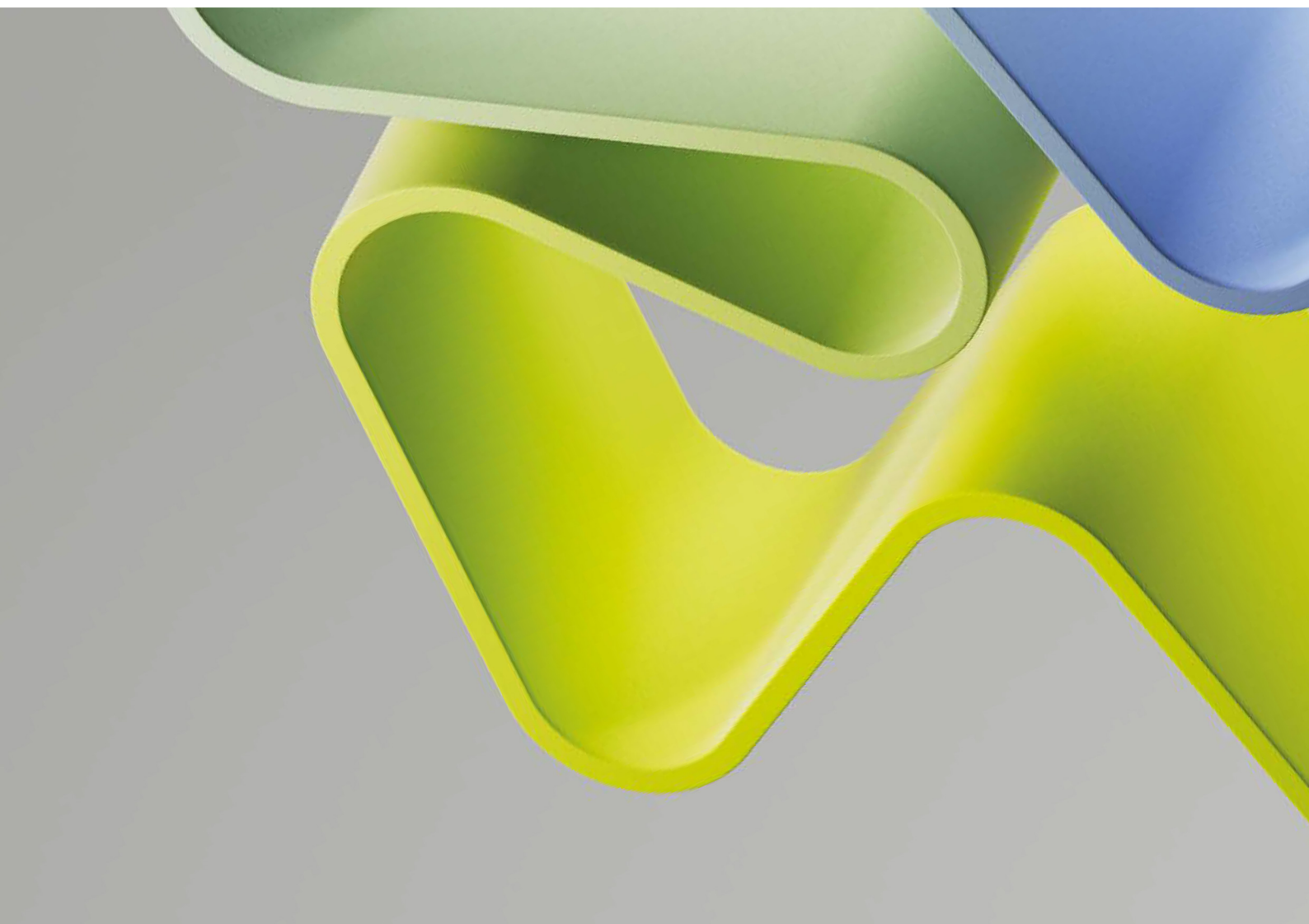
Evaluation of Medicine and Health 2023-2024

Evaluation report – Panel 2c

Research Group: Department of Molecular Oncology (DMO),
Institute for Cancer Research (ICR)

Administrative Unit: Division of Cancer Medicine

Institution: Oslo University Hospital and University of Oslo



Abstract

The Department of Molecular Oncology (DMO) research group has a translational cancer genetics profile and the key strategies including 1) interdisciplinary approach ensured by complementary expertise (genetics, epigenetics, cell biology, bioinformatics, computational oncology, cancer informatics) of the research unit leaders and 2) development of broad research resources such as living biobanks (>300 tumour organoid lineages) and biomedical platforms and informatics infrastructure and competence. Benchmarks are related to publishing high-quality research, innovation, attracting external grants, and conducting clinical trials. Due to constant collaboration with clinical partners and national networking the group has been involved as a core experimental lab in national studies and precision cancer medicine clinical trials. It has contributed to educating 29 PhD and 29 MSc, promoted mobility (outgoing and incoming visits) of in-training and trained students and participation in national/international leadership courses. Group members received nine young investigator awards in the period. National and international collaborations of group's members attracted external grants (152 million NOK in the period 2018-2022) covering about 70% of the group's total budget. 231 high quality Pubmed publications, 138 of which (60%) are with group members as first and/or last author have been delivered in the 2012-2022 period.

Overall assessment

This is a top Functional Oncology group engaged in reaching the overarching goal to translate biological discoveries into improved treatment of patients with solid tumours. The group established a biobank of >300 colorectal patients' iPSC-organoid lineages providing the *in vitro* platform to test the patient-specific response to drug treatments according to precision medicine practice; set up liquid biopsies (urine, blood, bile) for early cancer detection and recurrence; stored and processed patients' clinical, pathological and large-scale multi-omics data at diagnosis and follow-up by bioinformatics analyses to establish a reference framework. It also expanded/updated broad research technology platforms in-lab introducing in throughput genomic investigations (Long Read Sequencing) which allows detection of structural rearrangement and direct methylome analysis and developed new tools/pipelines for data integration. This intense activity accompanied by high performance in educational activities, national/international projects attracting external grants, excellent cooperation with the administration team, is promising further achievements.

Due to excellent performance across all evaluation criteria and outstanding contribution to translate groundbreaking discoveries on solid tumours into patients' diagnosis and care the research group stands out at the national and the international level.

Grading:

Dimensions	Score
Organisational dimension (How adequate the organisational environment is in supporting the production of excellent research).	5
Quality dimension (Research and publication quality/Research group's contribution)	5/5
Societal impact dimension (Research group's societal contribution/User involvement)	5/5

Recommendations

- Maintain and implement the ability of conjugating new knowledge on solid tumours obtained by increasingly powerful "omics techniques" to patients' management and care according to the precision medicine approach.

Scales for research group assessment

Organisational dimension

Score	Organisational environment
5	An organisational environment that is outstanding for supporting the production of excellent research.
4	An organisational environment that is very strong for supporting the production of excellent research.
3	An organisational environment that is adequate for supporting the production of excellent research.
2	An organisational environment that is modest for supporting the production of excellent research.
1	An organisational environment that is not supportive for the production of excellent research.

Quality dimension

Score	Research and publication quality	Score	Research group's contribution Groups were invited to refer to the Contributor Roles Taxonomy in their description https://credit.niso.org/
5	Quality that is outstanding in terms of originality, significance and rigour.	5	The group has played an outstanding role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	4	The group has played a very considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	3	The group has a considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
2	Quality that meets the published definition of research for the purposes of this assessment.	2	The group has modest contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
1	Quality that falls below the published definition of research for the purposes of this assessment.	1	The group or a group member is credited in the publication, but there is little or no evidence of contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.

Societal impact dimension

Score	Research group's societal contribution, taking into consideration the resources available to the group	Score	User involvement
5	The group has contributed extensively to economic, societal and/or cultural development in Norway and/or internationally.	5	Societal partner involvement is outstanding – partners have had an important role in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
4	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is very considerable given what is expected from groups in the same research field.	4	Societal partners have very considerable involvement in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
3	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is on par with what is expected from groups in the same research field.	3	Societal partners have considerable involvement in the research process, from problem formulation to the publication and/or process or product innovation.
2	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is modest given what is expected from groups in the same research field.	2	Societal partners have a modest part in the research process, from problem formulation to the publication and/or process or product innovation.
1	There is little documentation of contributions from the group to economic, societal and/or cultural development in Norway and/or internationally.	1	There is little documentation of societal partners' participation in the research process, from problem formulation to the publication and/or process or product innovation.