**Curriculum vitae**

**PERSONAL INFORMATION**

Family name, First name: Gjertsen, Bjørn Tore

Researcher unique identifiers: ORCID: www.orcid.org/0000-0001-9358-9704

ResearcherID: O-1542-2015

Date of birth: August 27th, 1966

Nationality: Norwegian

URL for web site: [www.uib.no/en/ccbio/73500/signalling-targeted-therapy](http://www.uib.no/en/ccbio/73500/signalling-targeted-therapy)

* **EDUCATION**

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| 1995 | Ph.D. at the Medical Faculty/ Department of Anatomy / University of Bergen / Norway |
| 1992 | MD, Medical Faculty / University of Bergen (UiB) / Norway |

* **CURRENT POSITIONS**

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| 2007 – | Professor (full) of Haematology / University of Bergen / Norway |
| 2007 – | Senior Consultant of Haematology at the Department Medicine / Haukeland University Hospital (HUH) / Norway |
| 2019 – | Chief of Research / HUH / Norway |

* **PREVIOUS POSITIONS**

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| 2017 – 2019 | Director of Research / Helse Bergen and Helse Vest Health Trusts / Norway |
| 2010 – 2018 | Senior Consultant in the Clinical Trials Unit at the Department of Research and Development / Haukeland University Hospital / Norway |
| 2002 – 2007 | Postdoc at the Department of Internal Medicine / University of Bergen / Norway |
| 1999 – 2006 | Resident in haematology, oncology and internal medicine / Helse Bergen / Norway |
| 1997 – 1999 | Postdoc at the Department of Molecular Pathology / University of Texas MD Anderson Cancer Center / USA, supervisor Prof. Timothy McDonnell |

* **FELLOWSHIPS AND AWARDS**

2021 King Olav V's Prize for Cancer Research / the Norwegian Cancer Society

2018 Royal Physiographic Society of Lund University / medical class of foreign members / Sweden

2006 Junior prize Søren Falch Foundation for Medical Research (2006) / UiB / Norway

2006 Young Researcher Prize, Onkologisk forum, Norway

2005 UiB Best Publication: Irish JM, Hovland R, Krutzik PO, Perez OD, Bruserud O, Gjertsen BT, Nolan GP. ***Single cell profiling of potentiated phospho-protein networks in cancer cells.*** Cell. 2004; 118:217-228. (Citations: 533, IF 28.389)

1997 – 1998 Fulbright fellowship (1997 – 1998)

1992 – 1995 Scholarship / PhD fellow / the Norwegian Cancer Society, at Department of Anatomy / University of Bergen / Norway

* **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

2000 – 2021 Number of Postdocs and Researcher: 10 / PhD Main supervision 12 (total 22) / Master Students main sup. 17 / Current Number of Postdocs/scientists 7, currently 6 PhDs.

Department of Biomedicine (1 PhD), Department of Clinical Science / UiB / Norway

* **TEACHING ACTIVITIES**

2007 – Teaching position: Haematology / UiB / Norway: Lectures in benign and malignant blood disorders, bedside teaching, courses in microscopy, examinations. Lectures in personalized medicine, lectures in Medical Technology (2018 –), Lectures at PhD training in Translational medicine.

* **ORGANISATION OF SCIENTIFIC MEETINGS**

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| 2019 | 4th International p53 isoforms meeting and 9th International p63/p73 workshop / Dubrovnik / Croatia, 3rd – 6th November / co-organizer |
| 2017 | 3rd International Conference on p53 isoforms, 19-21 June, Bergen, Norway / organizer |
| 2014 – 2023 | CCBIO Annual Symposium, CCBIO Special Seminars, Bergen, Norway / co-organizer |
| 2011 | Nordic Haematology Spring Meeting / Bergen / Norway / co-organizer |
| 2007 | Nordforsk Network on p53 and Cell Cycle (Nordics) / Bergen, Norway / organizer |
| 2002 – 2011 | Ann Bergen Res Conf on Cancer Research / Bergen, Norway / co-organizer |

* **INSTITUTIONAL RESPONSIBILITIES**

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| 2016 – 2023 | Centre for Cancer Biomarkers (CCBIO, UiB) / Co-Director |
| 2017 – 2020 | UiO Centre for Molecular Medicine Norway / NCMM Associate Investigator |
| 2013 – | Centre for Cancer Biomarkers (CCBIO) / Project leader |
| 2013 – 2016 | MedViz Visualization Cluster / Work package leader |
| 2011 – 2017 | Core Facility for Flow Cytometry at UiB / Director |
| 2004 – 2005 | UiB and Haukeland University Hospital / Committee for Translational Research |
| 2002 – 2006 /  2021 – 2024 | Steering Board Member / Medical Faculty / UiB |

* **REVIEWING ACTIVITIES**

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| 2021 – | Novo Nordisk Foundation / The Committee on Clinical and Translational Medicine |
| 2021 – 2022 | European Hematology Association Clinical Research Training in Hematology program - Course Director |
| 2020 – 2021 | EHA Clinical Research Training in Hematology / Incoming Course Director |
| 2021 – | Nordic AML Group, chair, founding member |
| 2019 – | EHA Scientific Working Group Acute Myeloid Leukemia |
| 2019 – | The Norwegian Cancer Society Scientific / Advisory Board |
| 2018 – | HOVON AML International Steering Group |
| 2016 – | Norwegian AML Group, chair, founding member |
| 2015 – | Swedish Wallenberg Academy Fellows Programme - Evaluator |
| 2014 – 2018  2008 – | Oslo Cancer Cluster / Oslo / Norway / Board of Directors  Lund University, Karolinska Inst., Uppsala University, UiT, UiO – Evaluator PhDs |
| 2007 – 2013 | The Norwegian Cancer Society / Review panel member |
| 2008 – 2013 | Program plan committees / RCN / Stem Cell Res, Cancer Res., & Clinical Research |
| 2008 | Åbo Akad University / Finland / Evaluation of Centre of Excellence |
| 2009 – 2019 | European Science Foundation College of Expert Reviewers |
| 2009 – 2013 | Helse Nord research grants– Evaluator, (chair 2012 – 13) |
| 2009 – | Editorial Board J Proteomics, ISRN Hematology (– 2014) and Acta Oncologica |
| 2003 – | The RHU Call of the French National Research Agency 2016. NCMM / Nordic EMBL partnership Tromsø (2014). Leukaemia & Lymphoma Research London (2009 – incl site visits 2009/13), The Duch Natl Cancer Inst (2008), Singapore National Medical Research Council, Ministry of Health (2007 – 10), Swiss Natl. Science Foundation (2006). Cancer Research UK (2004 –). Nordic Cancer Union (2003 – 05). EU Commission’s 6th Framework Prog Res Cancer section (2006) / Reviewer grant applications |

* **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

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| 2021 – | Nordic AML Group / Funding Member / Chair April 2021 – |
| 2016 – | Norwegian AML Study Group / Norway / Funding Member / Chair 2016 – |
| 2007 – | Norwegian Haematol Soc / secretary/treasurer 2007-11, Chair 2011 – 13. |
| 2006 – | Member American Soc Haematology / European Haem Assoc. / ASCO (2017 –) |

* **MAJOR COLLABORATIONS**

HOVON/SAKK AML Study Group (Profs. G Ossenkoppele/P Valk/ B Lowenberg), Nordic CML Study Group (Profs. H Hjorth-Hansen, S Mustjoki), Nordic AML Group (M Kontro, K Theilgaard-Mönch, S Lehmann), Norwegian AML Study Group (Drs. AS von Krogh, MI Olsen, M Waleed). Prof. Kimmo Porkka, Haematology and immunology, FIMM, Helsinki University Hospital / Finland. Dr. Caroline Heckman, Experimental haematol, FIMM / Helsinki. Dr. Krister Wennerberg, BRIC Copenhagen, Prof. Sören Lehmann, Haem and epigenetics, Uppsala University, Karolinska Insitutet, Sweden. Prof. Dominik Wolf, Haematol and immunol, Bonn University Clinic, Germany. Dr. Jonathan Irish, Immunol and exp haematol. Dr. Jean Christoph Bourdon, p53 cancer biology, Dundee University, Scotland, UK. Prof. Kjetil Taskén, University of Oslo, Norway. Ursula Klingmüller, Dkfz, Heidelberg, Germany. Dr. Gesine Bug, Hamburg. Dr. Nicolas Bonadies, Bern, Switzerland. Dr. Yngvar Fløisand, The Clatterbridge Cancer Centre NHS Foundation Trust, Prof. Nagesh Kalakonda, Experimental Haematology, University of Liverpool, UK.

**Section c: Ten years track-record**

**c.1. Key Bibliometrics:** Number of publications: 242 (PubMed.gov; 29AUG2021), Web of Science Clarivate Analytics (31AUG2021): 355 published items, h-index 47, times cited: 8 080. Google Scholar (12JUN2021) citations 11613, h-index 58, i10-index 176. First authorships: 15 (incl. two shared first author). Second author: 21. Last/senior author: 60.

**c.2. Contribution to science:** The foundation for development of functional diagnostics was created in the very early scientific works, studying signalling enzyme kinetics and cell fate regulation. This includes discovery of howintracellular signal transduction by protein phosphorylation regulate cell death (apoptosis)(J Cell Sci 1994, for review Biochim Biophys Acta 1995), and description of distinct phenotypes of cell death also discovering cell death phenotypes deviating from the classic apoptosis. The concept of apoptosis-resistance mechanism in leukaemia through point mutation in a protein kinase (PKA RI; J Biol Chem 1993) was connected to the functional alteration of PKA enzyme kinetics, including use of various molecular “probes” or cyclic AML analogues directed against specific PKA isoforms. This was followed by development of a small molecular PKA-inhibitor (Rp-8Br-cAMPS; J Biol Chem 1995) that lacked the allosteric modulation of regulatory subunit I leading to cyclic AMP activation of PKA.

Later and as an independent researcher, my team delineated early phosphorylated protein modifications in chemotherapy-induced apoptosis in vitro and in patients (Leukemia 2004, Clin Cancer Res 2006, Blood 2008), and demonstrated the impact of wild type p53 protein isoforms modulation and gene expression in patients during high dose chemotherapy of acute myeloid leukaemia (AML) (Clin Cancer Res 2006, Blood 2007, Mol Cancer 2009, Oncogene 2012, Cancers 2020). The isoforms of the tumour suppressor p53 can be used to characterize chemotherapy (Cancers 2020), and map differentiation stage and differentiation therapy in AML (Cells 2021). Development of animal models and advanced molecular imaging of AML for development of p53- and signalling-targeted therapy (Blood 2008, Leukemia 2012, Cancer Res 2013, Blood 2013). Single cell phosphoprotein analysis in patient AML cells proved to allow phenocopy classification of mutations based on signalling pathways responses (Cell 2004, Blood 2007), introducing the concept of phosphoprotein signalling response for prognostic information. We developed single cell profiling as biomarkers in clinical trials of leukaemia (Haematologica 2017, Blood Cancer J 2011), supported by our finding in occupational medicine/exposome monitoring of more than 500 healthy individuals (Pharmacol Res 2016, Sci Rep 2016).

**c.3. 10-representative publications (last 10 years):**

1. Omsland M, Vibeke Andresen V, Gullaksen SE, Ayuda-Durán P, Popa M, Hovland R, Brendehaug A, Enserink J, McCormack E, Gjertsen BT. **Interferon alpha and tyrosine kinase inhibitors increase tunneling nanotubes (TNT) formation and cell adhesion in chronic myeloid leukemia (CML) cell lines.** FASEB J. 2020 34(3):3773-3791. Citations: 3. IF 5.191. ••Impact: The first report on upregulation of TNT by kinase inhibitors and indicate that the old anti-leukemic interferon-alpha act share the same mechanism as kinase inhibitors. The effect of kinase inhibitor on TNT is an example of functional regulation by small molecules.

2. Gullaksen SE, Skavland J, …, Gjertsen BT. **Single cell immune profiling by mass cytometry of newly diagnosed chronic phase chronic myeloid leukaemia treated with nilotinib.** Haematologica 2017; 102:1361-1367. Citations: 13. IF 5.814. •••Impact: This paper introduces mass cytometry panel as a core technology for single cell monitoring in clinical trials. Prognostication based on single cell analysis at 7 days indicate molecular response (tumour load) at 18 months on targeted therapy that predispose to cardiovascular disease.

3. Engen C, Hellesøy M, Grob T, Löwenberg B, Valk PJM, Gjertsen BT**. Sex disparity in acute myeloid leukaemia with FLT3 internal tandem duplication mutations: implications for prognosis.** Mol Oncol. 2021 Jun 8. doi: 10.1002/1878-0261.13035. Citations: 0. IF 6.603. ••Impact: Prognostication based on FLT3 genetics seems only to be valid for females. Leukaemia cell samples are distinct in females and males in terms of gene expression and ex vivo drug sensitivity, in addition to the previously known sex depended mutational profile of leukaemia.

4. Engen C, Hellesøy M, Grob T, Hinai AA, Brendehaug A, Wergeland L, Bedringaas SL, Hovland R, Valk PJM, Gjertsen BT**. FLT3-ITD mutations in acute myeloid leukaemia - Molecular characteristics, distribution and numerical variation.** Mol Oncol. 2021 Apr 5. doi: 10.1002/1878-0261.12961. Citations: 0. IF 6.603. •Impact: This report demonstrates the heterogeneity of FLT3 mutations in AML, and raise a question about more accurate tools for therapy monitoring for varying cell populations in the same patient.

5. Forthun RB, Aasebø E, Rasinger JD, Bedringaas SL, Berven F, Selheim F, Bruserud Ø, Gjertsen BT. **Phosphoprotein DIGE profiles reflect blast differentiation, cytogenetic risk stratification, FLT3/NPM1 mutations and therapy response in acute myeloid leukaemia.** J Proteomics. 2018 Feb 20;173:32-41. Citations: 7. IF 3.537. ••Impact: Underpinning data on signaling networks affected by the phenotypes and genetics in AML.

6. McCormack E, Mujic M, Osdal T, Bruserud Ø, Gjertsen BT**. Multiplexed monoclonal antibodies: A new strategy in preclinical time domain imaging of acute myeloid leukemia.** Citations: 15. IF 9.060. Blood. 2013;121:e34-42. Impact: outline in vivo multiplexing imaging in leukemia. •••Impact: Seminal paper that point in the direction of multiplex analysis in medical imaging.

7. Sulen A, Lygre SH, Hjelle SM, Hollund BE, Gjertsen BT**. Elevated monocyte phosphorylated p38 in nearby employees after a chemical explosion.** Sci Rep. 2016 Jul 6;6:29060. Citations: 1. IF 4.259. ••Impact: Demonstrate that single cell signaling profiling in a cross-sectional healthy survey can be used to examine exposure to smoke and correlate with occupational activity of exposure.

8. McCormack E, Haaland I, …, Gjertsen BT. **Synergistic induction of p53 mediated apoptosis by valproic acid and nutlin-3 in acute myeloid leukemia.** Leukemia. 2012 May;26(5):910-7. Citations: 63. IF 11.528. •Impact: Developing low toxicity combination and use of protein biomarkers to monitor therapy response.

9. Andresen V, …, Gjertsen BT**. Anti-proliferative activity of the NPM1 interacting natural product avrainvillamide in acute myeloid leukemia.** Cell Death Dis. 2016 Dec 1;7(12):e2497. Citations: 8. IF 5.965. •Impact: Targeted therapy concept that point in the direction of functional diagnostics.

10. Ånensen N, ..., Gjertsen BT**. Correlation analysis of p53 protein isoforms with NPM1/FLT3 mutations and therapy response in acute myeloid leukemia.** Oncogene. 2012;31(12):1533-45. Citations: 44. IF 5.965. •••Impact: First report on protein p53 isoform analysis in prognostication demonstrating consistency between p53 isoform profiles, genomics, therapy response and survival in AML.

**c.4. Invited Presentations:**

• 2021 European Hematology Association Congress, Virtual meeting, June 2021

• 2020 Nordic Precision Medicine Forum, Virtual meeting, Sweden, November 2020

• 2019 European Hematology Association Congress, Amsterdam, The Netherlands

• 2019 European society for clinical cell analysis, Bergen, Norway

• 2019 The International p53/p63/p73 Isoforms Workshop 2019, Dubrovnik, Croatia

• 2018 The XXXVI Nordic Congress in Clinical Chemistry, Helsinki, Finland

**c.5. Major Contributions to Early Careers of Excellent Researchers:**

2020 MD PhD Liv Cecilie Thomsen / researcher / CCBIO UiB

2019 PhD Gro Gausdal / Director of Research / BerGenBio AS 2019-

2017 PhD Maria Omsland / NIH postdoc at Bethesda / USA / 2019 CCBIO UiB postdoc.

2016 PhD André Sulen /postdoc at Karolinska Institute / Sweden /postdoc UiB 2020-.

2013 Professor (full) Emmet McCormack / awarded TMF start-up grant 2009 / Pharmacy / UiB.

2009 PhD Vibeke Andresen / awarded senior researcher UiB / HUH / Trond Mohn Found.

2009 PhD Nina Ånensen / Special Advisor in Research / 2009-2020 The Norwegian Cancer Society / 2020 – Special Advisor / Oslo Metropolitan University

2004 Associate Professor Gry Sjøholt / Western Norway University of Applied Sciences

**c.6. Granted and pending patents:**

2021 – Patent pending Application No.: PCT/GB2020/052572. Compounds active versus leukemia cell lines

2020 – Patent pending United Kingdom Patent Application No. 2016193.1 Synergistic combination

2019 – Patents pending United Kingdom Patent Application No. 1914848.5 Carbazo G

2016 – European Patent No. 3532076 (17800414.9) Cryoimmunotherapy of cancer

**c.7. Examples of Leaderships in Industrial Innovation or Design:**

2013 – Co-founder and on Board of Directors, Alden Cancer Therapy AS & ACTII / Bergen / Norway

2003 – Co-founder and on Board of Directors, KinN Therapeutics AS / Bergen / Norway