

## **Publication guidelines for articles based on the Norwegian Mother, Father and Child Cohort Study (MoBa)**

To protect confidentiality and ensure that MoBa is described correctly, all articles based on data and/or biological material from MoBa must follow MoBa's guidelines for publication. Mandatory references must be included, and the analyzes must comply with the research questions in the agreement/ decision letter. All articles using MoBa data and/ or biological material must be sent to the MoBa administration after publication.

The Principal Investigator (PI) is responsible for ensuring that the guidelines for publication are followed, and that the number of articles does not exceed the agreement with MoBa. MoBa does not take responsibility for the scientific content of the manuscript.

### **1. General aim of MoBa**

The article must be **within the general aim of the study**; to find causes of diseases. Other aims include detection of early signs of diseases and description of disease development.

A broader discussion of aims and methods is given in:

- Magnus P et al. Cohort profile: The Norwegian Mother, Father and Child Cohort Study. *Int J Epidemiol* 2006; 35: 1146-50
- Magnus P et al. Cohort Profile Update: The Norwegian Mother and Child Cohort Study. *Int J Epidemiol* 2016; 45:382-8.

### **2. Mandatory text for all manuscripts based on MoBa data and/or biological material**

#### **a. Title**

Preferably, The Norwegian Mother, Father and Child Cohort Study (MoBa) should be included in the title or sub-title of the publication.

#### **b. Keywords**

Please include the acronym 'MoBa' and/or 'The Norwegian Mother, Father and Child Cohort Study' as keywords to ensure that the MoBa cohort is identified consistently in scientific articles based on data and biological material from MoBa.

If data from the Medical Birth Registry of Norway (**MBRN**) is used, please include 'MBRN' and/or 'Medical Birth Registry of Norway' as keywords.

#### **c. Abstract**

The following text should be included **in all manuscripts**:

*This study is based on the Norwegian Mother, Father and Child Cohort Study (MoBa).*

If data from **MBRN** is used the following text should be included:  
*..and uses data from the Medical Birth Registry of Norway (MBRN).*

#### **d. Material and Methods**

The following text should be included **in all manuscripts**:

*The Norwegian Mother, Father and Child Cohort Study (MoBa) is a population-based pregnancy cohort study conducted by the Norwegian Institute of Public Health. Participants were recruited from all over Norway from 1999-2008. The women consented to participation in 41% of the pregnancies. The cohort includes approximately 114.500 children, 95.200 mothers and 75.200 fathers. The current study is based on version (to be filled in) of the quality-assured data files released for research in (to be filled in). The establishment of MoBa and initial data collection was based on a license from the Norwegian Data Protection Agency and approval from The Regional Committees for Medical and Health Research Ethics. The MoBa cohort is currently regulated by the Norwegian Health Registry Act. The current study was approved by The Regional Committees for Medical and Health Research Ethics (to be filled in).*

If data from the **MBRN** is used the following text should be included:

*The Medical Birth Registry (MBRN) is a national health registry containing information about all births in Norway.*

If **blood samples** were used:

*Blood samples were obtained from both parents during pregnancy and from mothers and children (umbilical cord) at birth.*

#### **e. Acknowledgement**

The acknowledgement section must include the MoBa cohort funders. In addition, the participating families who contributed with data and biological material shall be acknowledged.

##### ***All manuscripts***

The following text should be included **in all manuscripts**, including consortia manuscripts:  
*The Norwegian Mother, Father and Child Cohort Study is supported by the Norwegian Ministry of Health and Care Services and the Ministry of Education and Research. We are grateful to all the participating families in Norway who take part in this on-going cohort study.*

##### ***Manuscripts based on MoBa Genetics***

The following text should be included in **all manuscripts based on the genetic data (MoBa Genetics)**:

*We thank the Norwegian Institute of Public Health (NIPH) for generating high-quality genomic data. This research is part of the HARVEST collaboration, supported by the Research Council of Norway (#229624). We also thank the NORMENT Centre for providing genotype data, funded by the Research Council of Norway (#223273), South East Norway*

*Health Authorities and Stiftelsen Kristian Gerhard Jebsen. We further thank the Center for Diabetes Research, the University of Bergen for providing genotype data and performing quality control and imputation of the data funded by the ERC AdG project SELECTIONPREDISPOSED, Stiftelsen Kristian Gerhard Jebsen, Trond Mohn Foundation, the Research Council of Norway, the Novo Nordisk Foundation, the University of Bergen, and the Western Norway Health Authorities.*

### **Consortia manuscripts where MoBa contributes with metadata**

In consortium collaborations, MoBa will only constitute a part of the data presented in an article and the obligation to refer to the MoBa cohort is less comprehensive. MoBa should be acknowledged (see text above), and the following must be included in the Material and Methods:

*This study includes data from the Norwegian Mother, Father and Child Cohort Study (MoBa) conducted by the Norwegian Institute of Public Health.*

If not applicable to include description and reference to MoBa in the manuscript, a minimum description of MoBa with main references must be included in the supplementary part.

## **3. Mandatory text for manuscripts using data from sub-studies in MoBa**

A MoBa sub-study is a research project within MoBa where additional data or biological material from a sub-sample of the cohort has been collected.

For publications based on data and/or biological material from a sub-study, please see Annex A for description of references and acknowledgements to be included. This currently only applies to articles based on data from the Norwegian Environmental Biobank (NEB).

## **4. References**

### **Mandatory references for all publications including consortia manuscripts:**

- Magnus P, Birke C, Vejrup K, Haugan A, Alsaker E, Daltveit AK, Handal M, Haugen M, Hoiseth G, Knudsen GP, Paltiel L, Schreuder P; Tambs K, Vold L, Stoltenberg C. *Cohort Profile Update: The Norwegian Mother and Child Cohort Study (MoBa)*. *Int J Epidemiol* 2016; 45:382-8.

### **Mandatory reference if biological material is used:**

- Liv Paltiel, Anita Haugan, Trine Skjerden, Kari Harbak, Siri Bækken, Nina Kristin Stensrud, Gun Peggy Knudsen and Per Magnus. The biobank of the Norwegian Mother and Child Cohort Study – present status *Nor J Epidemiol* 2014; 24 (1-2): 29-35.

## **Other references, if relevant:**

### ***References about the cohort:***

- Magnus P, Irgens LM, Haug K, Nystad W, Skjaerven R, Stoltenberg C and the MoBa Study Group. Cohort profile: The Norwegian Mother and Child Cohort Study (MoBa). *Int J Epidemiol* 2006; 35:1146-50.
- Rønningen KS, Paltiel L, Meltzer HM, Nordhagen R, Lie KK, Hovengen R, Haugen M, Nystad W, Magnus P, Hoppin JA. The biobank of the Norwegian Mother and Child cohort study. *Eur J Epidemiol* 2006; 21:619-25.
- The Norwegian Mother and Child Cohort Study, End of Enrolment – Protocol II, Revised October 2012 [www.fhi.no/moba-en](http://www.fhi.no/moba-en)

### ***References about the data collected:***

- Brantsaeter AL1, Haugen M, Alexander J, Meltzer HM. Validity of a new food frequency questionnaire for pregnant women in the Norwegian Mother and Child Cohort Study (MoBa). *Matern Child Nutr* 2008;4:28-43.
- Meltzer HM1, Brantsaeter AL, Ydersbond TA, Alexander J, Haugen M. Methodological challenges when monitoring the diet of pregnant women in a large study: experiences from the Norwegian Mother and Child Cohort Study (MoBa). *Matern Child Nutr* 2008;4:14-27.

### ***References about the biological material collected:***

- Duale, N., et al., Human blood RNA stabilization in samples collected and transported for a large biobank. *BMC Res Notes*, 2012.
- Duale N., et al., Long-term storage of blood RNA collected in RNA stabilizing Tempus tubes in a large biobank – evaluation of RNA quality and stability. *BMC Res Notes*, 2014.

### ***References relevant for methods and validity:***

- Nilsen RM, Vollset SE, Gjessing HK, Skjærven R, Melve KK, Schreuder P, Alsaker ER, Haug K, Daltveit AK, Magnus P. Self-selection and bias in a large prospective pregnancy cohort in Norway. *Paediatr Perinat Epidemiol* 2009; 23: 597-608.
- Biele, G., Gustavson, K., Czajkowski, N. O., Nilsen, R. M., Reichborn-Kjennerud, T., Magnus, P. M., Stoltenberg, C., & Aase, H. (2019). Bias from self-selection and loss to follow-up in prospective cohort studies. *European Journal of Epidemiology*, 34(10), 927–938.
- Vejrup K, Magnus P, Magnus M. Lost to follow-up in the Norwegian mother, father and child cohort study. *Paediatr Perinat Epidemiol*. 2021;00:1–10.  
<https://doi.org/10.1111/ppe.12821>

## 5. Confounding effects

MoBa has a restrictive policy when it comes to publishing the direct effects of confounding variables, in order to avoid infringement on other research projects. Such information should not be published but can be submitted to referees/editors if required.

## 6. Open data practice

Due to Norwegian legislation, the researcher cannot make the data material on an individual level available to others at any time, including in connection with publication. No MoBa data on an individual or aggregated level may be uploaded into any repository or database at any time. The researcher may inform the journal about where to apply for a similar data set.

Suggested standard text to journals that want access to the research file:

*Data from the Norwegian Mother, Father and Child Cohort Study and the Medical Birth Registry of Norway used in this study are managed by the national health register holders in Norway (Norwegian Institute of public health) and can be made available to researchers, provided approval from the Regional Committees for Medical and Health Research Ethics (REC), compliance with the EU General Data Protection Regulation (GDPR) and approval from the data owners. The consent given by the participants does not open for storage of data on an individual level in repositories or journals. Researchers who want access to data sets for replication should apply through [helsedata.no](https://helsedata.no). Access to data sets requires approval from The Regional Committee for Medical and Health Research Ethics in Norway and an agreement with MoBa.*

Summary data from ‘omics’ studies (GWAS, EWAS etc.) in MoBa may be made available on the NIPH website (<https://www.fhi.no/en/studies/moba/for-forskere-artikler/gwas-data-from-moba/>) if required by the journal. Please contact the MoBa administration for guidance.

## 7. The published article

Once your manuscript is accepted and published, please send a copy in PDF format to [mobaadm@fhi.no](mailto:mobaadm@fhi.no). This includes consortia manuscripts.

### Media coverage of MoBa publications

We encourage media coverage when appropriate to increase knowledge of MoBa and to show participating families and others that MoBa generates valuable results. All contact with journalists should be based on results accepted for publication in scientific journals, or as printed abstracts at scientific conferences. MoBa encourages all researchers to credit The Norwegian Mother, Father and Child Cohort Study. If a researcher wants assistance with media relations, he or she may contact the MoBa communications offices at [nettredaksjon@fhi.no](mailto:nettredaksjon@fhi.no).

Please send a copy of press release or media coverage to [mobaadm@fhi.no](mailto:mobaadm@fhi.no). Press releases can be made public on the NIPH website [www.fhi.no/moba](https://www.fhi.no/moba).

**Brief popular science summary of the accepted article**

We may ask you to submit a brief popular summary of the article to be used for communication and dissemination purposes to [mobaadm@fhi.no](mailto:mobaadm@fhi.no), if required.

## ANNEX A – SUB-STUDIES

### **Introduction**

This annex describes mandatory text and references to be included in articles based on data and/or biological material collected from MoBa participants as part of a specific sub-study.

### **1. The Environmental Biobank**

*Manuscripts based on the Norwegian Environmental Biobank (NEB) should include the following text:*

#### **a. Material and Methods**

If any data from laboratory measurements from the Norwegian Environmental Biobank (NEB) part 1 (previously denoted MoBaETox) were used:

*The Norwegian Environmental Biobank is a sub-study within MoBa established with the aim of biomonitoring nutrients and environmental contaminants in MoBa participants. The study included 2999 pregnant women with available genetic data who had donated blood and urine samples and had responded to questionnaires 1-6 in MoBa.*

If any biological samples or data from laboratory measurements from the Norwegian Environmental Biobank (NEB) part 2 were used:

*The Norwegian Environmental Biobank is a substudy within MoBa established with the aim of biomonitoring nutrients and environmental contaminants in mothers, fathers and children participating in MoBa. The study included approximately six hundred triads of mothers, fathers and children who donated blood and urine samples, and responded to a questionnaire.*

#### **b. Acknowledgement**

The following text should be included in all manuscripts based on biological samples and/or data from the *Norwegian Environmental Biobank (NEB) part 1* (previously denoted MoBaETox) *and part 2*:

*“The Norwegian Institute of Public Health (NIPH) has contributed to funding of the Norwegian Environmental Biobank (NEB). The laboratory measurements have partly been funded by the Research Council of Norway through research projects (275903 and 268465), and the human biomonitoring project HBM4EU, funded by the European Union’s Horizon 2020 research and innovation programme under grant agreement No 733032. “*

**c. Mandatory reference if data from laboratory measurements from part 1 of the Norwegian Environmental Biobank (previously denoted MoBaETox) is used:**

- Caspersen IH, Thomsen C, Haug LS, Knutsen HK, Brantsaeter AL, Papadopoulou E, et al. Patterns and dietary determinants of essential and toxic elements in blood measured in mid-pregnancy: The Norwegian Environmental Biobank. *Sci Total Environ.* 2019; 671: 299-308. doi: 10.1016/j.scitotenv.2019.03.291.

*If parameters below are used, the respective references should also be cited:*

Parameters	Matrix	Reference
Iodine	urine	Abel et al., 2018
Creatinine	urine	Abel et al., 2018
Sodium and potassium	urine	Kelsey et al., 2022
Elements/metals	whole blood	Caspersen et al., 2019
Glycated haemoglobin (HbA1c)	whole blood	Carlsen et al., 2022
Thyroid function parameters	plasma	Abel et al., 2018
C-reactive protein (CRP)	plasma	Kelsey et al., 2022
Ferritin and transferrin	plasma	Caspersen et al., 2021
Vitamins: retinol (vitamin A), carotenoids, tocopherols (vitamin E), 25-hydroxy-vitamin-d (vitamin D)	plasma	Kelsey et al., 2022

- Abel MH, Korevaar TIM, Erlund I, Villanger GD, Caspersen IH, Arohonka P, Alexander J, Meltzer HM, Brantsaeter AL. Iodine Intake is Associated with Thyroid Function in Mild to Moderately Iodine Deficient Pregnant Women. *Thyroid.* 2018;28(10):1359-1371. doi: 10.1089/thy.2018.0305
- Caspersen IH, Thomsen C, Haug LS, Knutsen HK, Brantsaeter AL, Papadopoulou E, Erlund I, Lundh T, Alexander J, Meltzer HM. Patterns and dietary determinants of essential and toxic elements in blood measured in mid-pregnancy: The Norwegian Environmental Biobank. *Sci Total Environ.* 2019 671:299-308
- Caspersen IH, Iglesias-Vázquez L, Abel MH, Brantsaeter AL, Arija V, Erlund I, Meltzer HM. Iron status in mid-pregnancy and associations with interpregnancy interval, hormonal contraceptives, dietary factors and supplement use. *Br J Nutr.* 2021 Oct 28;126(8):1270-1280. doi: 10.1017/S0007114521000295.
- Carlsen EØ, Harmon Q, Magnus MC, Meltzer HM, Erlund I, Stene LC, Håberg SE, Wilcox AJ. Glycated haemoglobin (HbA1c) in mid-pregnancy and perinatal outcomes. *Int J Epidemiol.* 2022 ;51(3):759-768.
- Kelsey PT, Papadopoulou E, Borge TC, Dahl C, Brantsaeter AL, Erlund I, Meltzer HM, Haug LS, Caspersen IH. Ultra-processed food consumption and associations with biomarkers of nutrition and inflammation in pregnancy: The Norwegian Environmental Biobank. *Front Nutr.* 2022 Dec 8;9:1052001. doi: 10.3389/fnut.2022.1052001.