Maternity Protection in the Lab

A Guide for Practical Implementation

Max-Planck-Gesellschaft
zur Förderung der Wissenschaften e.V.
Administrative Headquarters

Munich, 20 March 2018

Inhalt

1 Introduction and principles

Maternity protection for pregnant or breastfeeding scientists in the lab is a fixed element of occupational safety, and poses a particular challenge when it comes to equal opportunity.

Recommendations have been derived from a working group project, support from the Max Planck Society's Health and Safety at Work Committee, a review of the practice at selected Institutes and the inclusion of external expertise, and they now form the basis for this guide.

The Max Planck Society's aim is to enable pregnant and breastfeeding scientists to pursue their work in the service of research without impairing the protection of the unborn child, the pregnant woman or the breastfeeding mother.

1. The basic requirements of occupational health and safety are always fulfilled at all Institutes and facilities belonging to the Max Planck Society's consortium of applicants[1], regardless of the special demands made on behalf of pregnant or breastfeeding employees.
2. Scientific work, pregnancy and family life can be reconciled in the Max Planck Society.
3. The Max Planck Society undertakes in the name of equal opportunity to help scientists as far as possible to continue their lab work during pregnancy and breastfeeding and to take particularly effective steps to ensure that this isachieved.
4. The safety measures in place and the occupational health support meet statutory requirements, and they enable the Institute Management to be advised on all matters concerning maternity protection.
5. It is mandatory to carry out a "maternity protection risk assessment".
6. The Works Council at the Institute/facility is involved in the process in accordance with the relevant statutory requirements.
7. The continued employment of a pregnant scientist in compliance with her health needs takes precedence over employment restrictions or bans. The protective measures resulting from the risk assessment must be designed accordingly.

1 hereafter referred to as the Max Planck Society

8. The protective measures must be reviewed during the time of the pregnancy to ensure their efficacy and, if necessary, adapted.

9. The Institutes and facilities must provide staff and funds to implement the protective measures. With regard to the specific implementation concepts, the actual and legal options are reviewed in each individual case and used as the basis for taking decisions. The Max Planck Society will endeavour in the process to mitigate any ban on employing female scientists required in any individual case by taking steps to compensate them. The aim should be to avoid any interruption to the scientific work. Regardless of the source of the funding, in the event of any measures exceeding statutory requirements, thought should be given to involving the funding providers or governing bodies of the Max Planck Society.

10. The Max Planck Society is keen to take account of the needs of pregnant scientists in its plans for future building work.

11. The pregnant employee and their line manager will conduct a documented meeting that identifies ways of reconciling her career and family life, and especially any existing mechanisms for obtaining access to childcare facilities.

12. Regular seminars on the subject of "maternity protection in the lab" will be offered for the Institutes and other research facilities. The costs will be centrally funded.

2 Legal framework

Entitlement to protection during pregnancy, the time after birth and the breast-feeding period is governed by the Maternity Protection Act[2].

The particular duty of care does not end with the birth of the child but 8 weeks after the birth at the earliest (or 12 weeks in the case of premature or multiple births; on application of the mother also in case of a disabled baby). If the child is partially or wholly breast-fed, further demands are made on the working conditions for the entire duration such as the design of the workplace, the granting of breastfeeding times or opportunities for resting.

2 New law regulating maternity protection dated 23.05.2017, valid since 01.01.2018

3 Occupational safety for all employees

The basic requirements in terms of occupational safety are deemed to have been met if

✓ the safety organization (duties of line managers and employees as well as the organization of occupational safety) is in line with the trade associations regulation **"Principles of Prevention"**[3].

and

✓ observance of the operating regulations and protective measures as well as implementation of the inspection obligations arising from the trade association paper **"Working Safely in Laboratories"** ("Laboratory Directive") are guaranteed.

Measuring points and stations in the field are deemed to be laboratories.

The Max Planck Society designates the implementation of requirements arising from the regulations specified as basic occupational safety. This applies to all employees without restrictions.

Due to the different types of laboratories, a separate review has to be conducted for each facility to determine what trade association and national legal frameworks have to be taken into account.

All additional requirements relating to maternity protection are set out in Chapter 5. The forms and documentation required can be found in the annexes to this guide.

3 DGUV (German Social Accident Insurance) Regulation 1: Principles of Prevention, Berlin 2013
4 DGUV Information Paper 213-850: Working Safely in Laboratories, Berlin 2008, updated 2017

4 Participating persons

Pregnant or breastfeeding scientist:
The guide applies to pregnant and breastfeeding scientists working in research. The aim is to enable them to maintain their own research work even during pregnancy and breastfeeeding. Although the statutory requirements are met by ensuring basic occupational safety, the restrictions can lead to the interruption of their research work. In such a case, the question of whether compensation measures are conceivable should be clarified by reviewing the individual circumstances.

Institute Management:
Occupational safety is a managerial responsibility. The Institute management is therefore responsible for ensuring legally compliant implementation. It is authorized to instigate more extensive measures which can reconcile continuation of the scientist's research and safeguarding protective aims. The Institute management can delegate its responsibilities for occupational health and safety to other employees.

Safety experts and occupational physicians:
They advise the parties at the Institute on occupational health and safety. The focus of their work lies in advising the employer. In particular, such consultation includes assessing working conditions and activities in the event of pregnancy.

Works Council:
The participation rights of the local Works Council in assessing workplace conditions must be preserved.

Officer for Environment and Safety and Gender Equality Officer:
They guarantee observance of uniform standards, monitor them and implement any revisions required to the guide; they can also use their professional discretion to determine the nature and scope of their participation in assessing workplace conditions and in drawing up measures to be taken.

Institute management

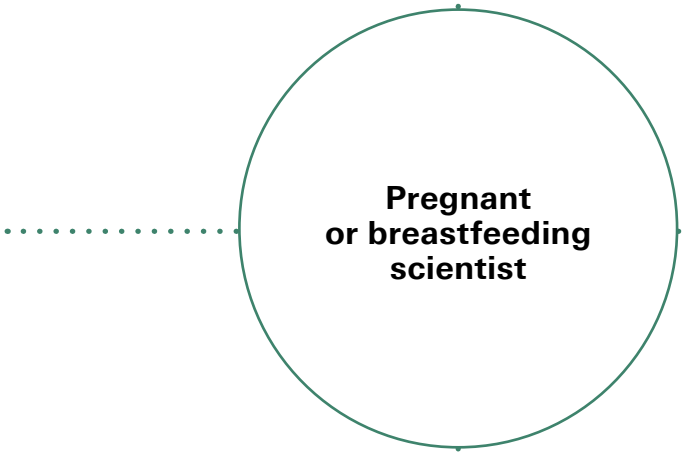
— guarantees implementation of the guide

— arranges for the risk assessment to be quickly prepared and the protective measures to be implemented

Officers for the environment and safety and for gender equality at Administrative Headquarters

— advise and support the parties involved

— obtain further expertise where needed



The local Works Council

— uses its right of participation in assessing workplaces

— upholds the rights of employees

Occupational physician and safety expert

— advise pregnant /breastfeeding women and line managers on occupational health and safety

— examine the procedures applied and the efficacy of the measures

5 Process and procedures

The protection of mothers-to-be must be guaranteed without restrictions from the moment the employer is informed by the employee of their pregnancy.

The following steps are required to ensure that the pregnant employee and the management of the facility not only meet the statutory requirements but also define more extensive measures to largely preserve their employment options.

The framework conditions for the period following the protection period defined in law must also be designed in such a way that family life and scientific activity can be reconciled on a lasting basis, using the various mechanisms open to the Max Planck Society for supporting childcare.

Notification by the employee:
Line manager notified
of existing pregnancy

Employer's duty of information
Responsible supervisory authority
to be informed of the existing pregnancy

Risk assessment:
Assessment of pregnant employee's
workplace conditions by the employer

Measures:
Definition of measures and nature and scope of further
employment during the pregnancy and breastfeeding period

Framework conditions:
Definition of working conditions after the end of the breastfeeding
period and the statutory protection period

5.1 Notification by the employee

The employee will inform her line manager in writing that she is pregnant. However, the Max Planck Society as the employer can only enact effective protective mechanisms if it is informed of the pregnancy at an early opportunity. The special protection of the unborn life and the observance of all statutory requirements can only be implemented from the moment of this notification.

The Max Planck Society explicitly encourages women to announce their pregnancy at an early stage. This is the only way to ensure that working conditions are constructively and individually structured.

The line manager must document in writing the fact that they have been informed of a pregnancy (e.g. as a note in the file, see Annex 2 for template). The name of the employee, her job title, the probable date of delivery and the date of the notification must be documented.

Our recommendation to the pregnant employee is to inform their line manager in person. It must be guaranteed that the Managing Director learns of the pregnancy.

5.2 Employer's duty of information

The Maternity Protection Act requires the responsible State authority (for list see Annex 1, for template see Annex 3) to be informed without delay. Notification can be given informally. The use of forms available in many Federal States is recommended.

For Max Planck Institutes outside Germany, an internal notification will suffice.

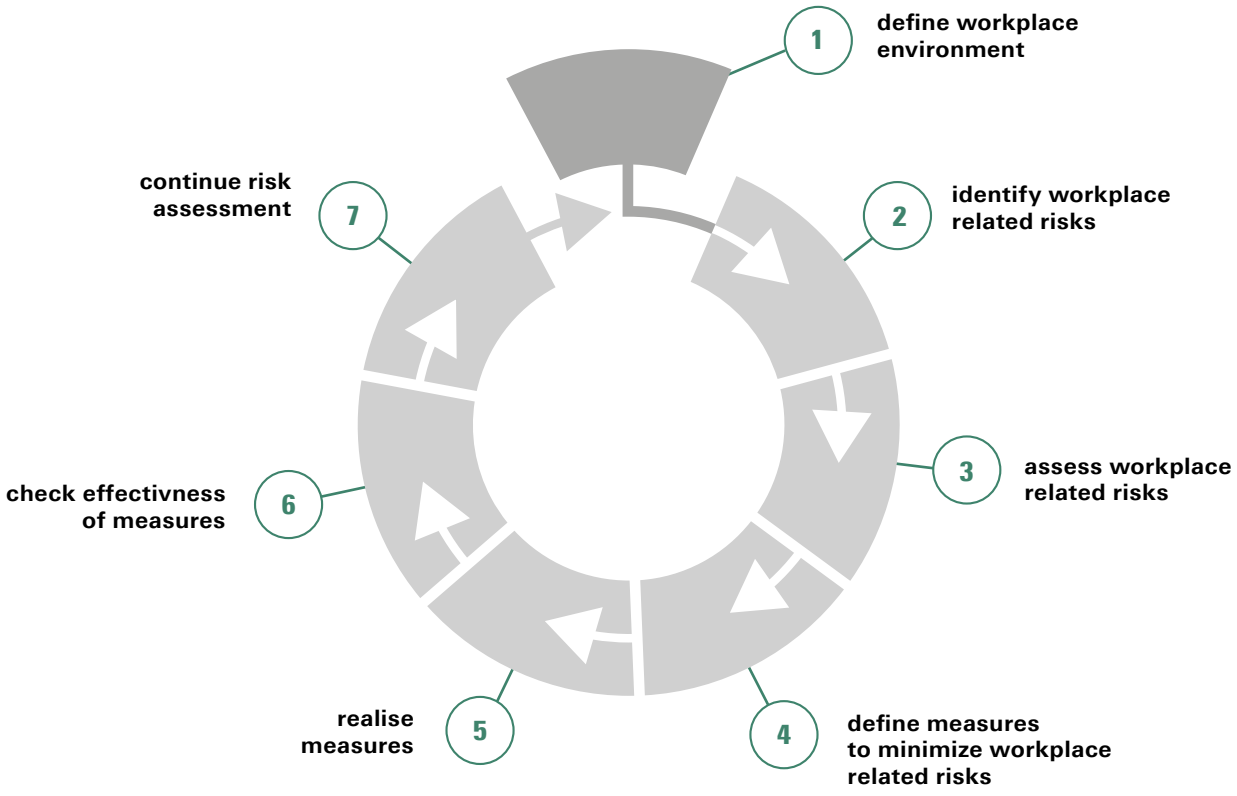
Employees at the Institute must also be informed if there are measures to be put in place for occupational health and safety and possible implications for the working conditions in the vicinity of the pregnant employee. However, the reason for the measures may only be disclosed with the consent of the pregnant employee.

5.3 Risk assessment

There are certain risks to which mothers-to-be and breastfeeding mothers may only be exposed to a limited extent or not at all. The risk assessment "Maternity Protection in the Lab" takes into account the special need for protection.

Any procedure by which health and safety risks to employees resulting from the circumstances of the workplace and the work performed, can be systematically recorded and evaluated, is designated as a risk assessment. The procedure is not precisely defined but it must guarantee that all risks, stresses and strains on the pregnant or breastfeeding employee are registered.

Process of risk assessment



(source: www.bgw-online.de/DE/Arbeitssicherheit-Gesundheitsschutz/Gefaehrdungsbeurteilung/Sieben-Schritte/7_Schritte_node.html)

The line manager will conduct the risk assessment and should draw on all individuals and information necessary to reach a professional assessment. The pregnant employee should be able to provide comprehensive information on the working conditions, work processes and the materials and equipment used in her area of work.

The Works Council must be involved in carrying out the risk assessment. The Institute management will be supported by occupational physicians, safety experts and other specialists.

The risk assessment is usually to be completed by the Institute within seven working days of the announcement by the expectant mother. This includes a reliable schedule for implementing the measures which will permit the mother-to-be to carry out her research during her pregnancy with as few restrictions as possible.

As a result of the risk assessment, the Institute will be in a position to take the most effective steps required to protect health and safety. Risk assessments in the Max Planck Society should contain the steps outlined below.

One fundamental element of evaluating the risk to a pregnant employee is an up-to-date directory of the biological and chemical agents used in the facility's work.

To assess the risk factors, there are clear assessment criteria in most cases such as thresholds, hazard classes, exposure times which it is compulsory to apply. Some risk factors (risk of slipping, handling animals, etc.) cannot be precisely recorded in quantitative terms. Here, an assessment by the occupational physician and safety expert is required in each individual case.

The use of the checklist in Annex 4 is recommended. This lists all the potential risks such as:

- **Risks from physical effects**
e.g. radioactive radiation, physical activity from carrying heavy loads.

- **Risks from chemical properties**
e.g. exposure to substances at work which are carcinogenic or can be absorbed through the skin.

- **Risks from biological substances at work**
e.g. handling tissue or body fluids which may contain dangerous pathogens for humans or animals.

- **Risks from working conditions and work processes**
e.g. working with heightened risk of slipping or falling.

- **Risks from structure of working hours**
e.g. night shifts, overtime

There is statutory duty to document the result of the risk assessment. The measures defined also form part of the documentation. It ensures that steps, responsibilities and dates for putting occupational safety measures in place as well as for legally implementing protection goals, are defined.

These requirements are met by the form "Maternity Protection Risk Assessment".

Occupational safety is a continuous process that is never wholly complete. The risk assessment must be updated if new risks emerge or might emerge. When updating, the focus lies on changes and on risks not yet eliminated. It is not necessary to repeat the whole assessment.

In the updated version of the law governing maternity protection, work and workplaces must be assessed with a view to the employment of pregnant and/or breastfeeding women. This applies regardless of whether a pregnant or breastfeeding employee is actually employed at the time of the assessment (so-called generic risk assessment). It must be determined whether

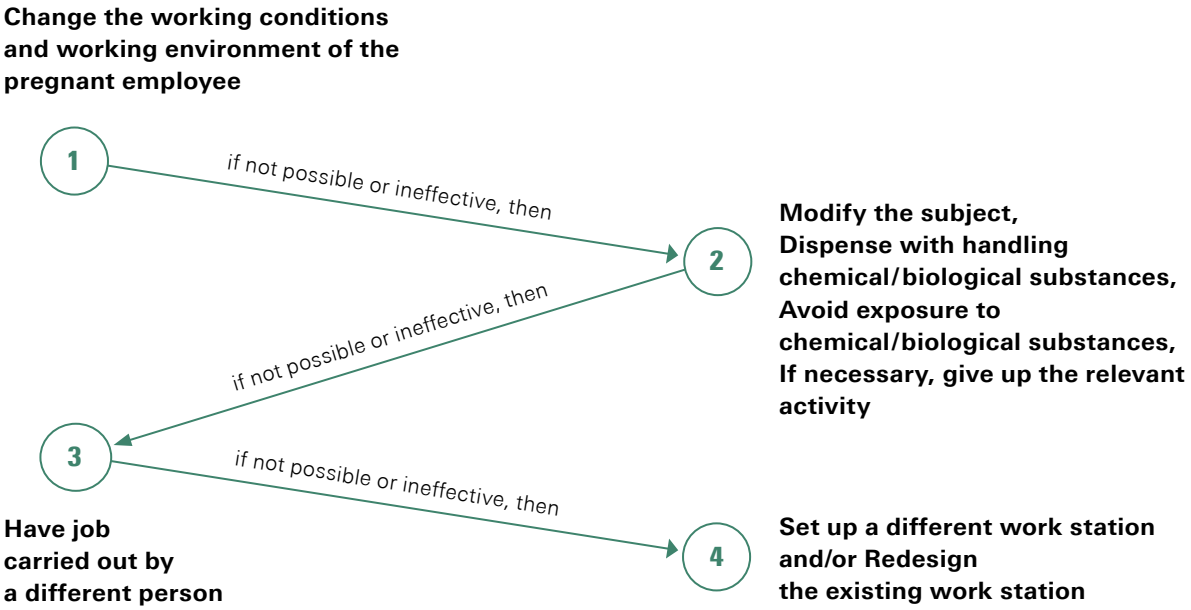
- **any special protective measures will be required,**
- **whether working conditions will have to be redesigned or**
- **whether it will be impossible for the woman to continue her work at this work station.**

The Institutes and other facilities of the Max Planck Society guarantee that this risk assessment will be given concrete form as soon as it becomes known that one of the employees is pregnant or breastfeeding.

5.4 Defining and implementing measures

If risks or strains are identified, steps to alleviate them must be developed and implemented immediately. Based on their efficacy, the protective measures should if possible be carried out in accordance with the **"S-T-O-P principle"** in the following order: substitution – technical – organizational – personal".

The "List of Measures for Maternity Protection in the Lab" in accordance with Annex 5 must be used for documentation purposes.



5.5 Framework conditions

The framework conditions are to be understood as the structure of working conditions at the end of the breastfeeding period and statutory protective periods. For example, they include childcare opportunities for different age ranges and needs, as well as working time models for all employees.

Here, the Max Planck Society has developed a range of measures available equally to women and men as part of the reconciliation of career and family life.

6 Employment during pregnancy and breastfeeding period

A decision on the nature and scope of the employee's further employment may only be taken after the "Maternity Protection Risk Assessment" has been concluded. The pregnant employee's line manager will arrange for this to be carried out and should avail themselves of all the expertise and aids required. Examples of typical laboratory and research work and their impact on the employment of pregnant or breastfeeding scientists can be found in Annex 7.

As the risk assessment is to be carried out and swiftly concluded as soon as the pregnancy is announced, no substantial interruption to research work is to be expected. However, it may be necessary to dispense with hazardous work in the laboratory for prophylactic reasons until the assessment has been completed.

If the result of the risk assessment establishes that there are no inadmissible strains or risks, the employee can continue her employment without restrictions.

If employment restrictions significantly affect her scientific work, some hazardous work can be carried out instead by a person with the requisite qualifications for a limited amount of time. Administrative Headquarters of the Max Planck Society will also conduct an individual examination of the circumstances.

6.1 Restrictions and bans on employment

Restrictions or bans on employment may result from the assessment of the risk factors to be examined. In this case, it is imperative to change the working conditions. The nature and extent of the employment restrictions must be clearly and unambiguously defined.

General bans on employment are obligatory wherever

- clear conclusions are reached from a legal perspective which do not admit any leeway for any other course of action

or

- the risk assessment concludes that risks or strains may result even at a low level of employment which may be harmful to the pregnant employee or the unborn child.

For example, this relates to exposure to noise, radioactivity or the degree of physical strain. Certain exposure thresholds may not be exceeded per day or for the entire duration of the pregnancy.

The pregnant employee will be informed by their line manager of all the results of the risk assessment to ensure that the justification for the nature and scope of any restrictions is clear. Other employees whose work is affected by the measures to protect the pregnant employee, must also be informed. Personality rights must be respected. Medical information or any other details of the pregnancy may only be released with the express permission of the employee. The assessment must be documented in a way that makes the decision transparently clear.

Employment bans should only be used as a last resort, primarily where it is not possible to take steps to protect the pregnant employee in spite of a careful assessment. The benefit of any doubt must be given in favour of protecting the pregnant employee and the unborn child.

Employment bans constitute important grounds for examining compensation measures in the form of having the work carried out by a different person on a temporary basis.

6.2 Compensation measures

All technical, organizational or staffing measures which permit work to be continued which is otherwise subject to a ban or restrictions, are designated as compensation measures. Such measures should be suitable for continuing the employee's scientific work at the level of quality and to the extent required to avoid potential career setbacks due to the fast-paced, competitive scientific environment. As a matter of principle, the Max Planck Society will always try to achieve the best individual solution in favour of the pregnant scientist.

Priority will be given to implementing measures that permit the pregnant scientist to continue her work herself.

If the assessment reveals that the pregnant employee cannot perform the work herself, but other persons can work instead of her, this option should be carefully examined and if possible implemented.

- Assistant research work can be performed by suitable lab technicians.
- By way of an exception and after examining each case individually, original research work can be performed by suitable, scientifically trained persons.

Short-term technical steps which, for example, achieve spatial separation from hazardous areas, can also be improvised by way of compensation. The Institute or facility can also obtain funds for such measures from a separate Administrative Headquarters budget.[5] Structural requirements which may support the continued employment of pregnant employees, can be found in Annex 6.

The systematic application of the present guide will enable all parties involved to guarantee that the health of the pregnant or breastfeeding scientist will be protected in a transparent, professional process.

Possible restrictions or bans on employment ensure that working conditions are designed to take account of health needs, and that scientific work can continue. By taking extensive steps which may exceed statutory requirements, the Max Planck Society will make it possible for pregnant or breastfeeding scientists to continue their excellent research.

5 For legal reasons, the Institute for Plasma Physics forms an exception to this rule

Annexes:
Documents for practical implementation

Annexes 2, 4 and 5 are available as Word files for individual editing.

Annex 1
Directory of responsible State authorities

The report pursuant to § 27 Maternity Protection Act is made to the authority specified below, depending on the Federal State in which the Institute is located. Corresponding forms for the report and further information are usually available for downloading.

— Baden-Württemberg
Regional Councils of the administrative districts

— Bavaria
Industrial Inspection Offices of the administrative districts

— Berlin
State Office for Occupational Health and Safety and Technical Safety

— Brandenburg
State Office for Occupational Safety, Consumer Protection and Health

— Bremen
Industrial Inspection Office of the State of Bremen

— Hamburg
Health and Consumer Protection Authority

— Hesse
Regional Councils of administrative districts

— Mecklenburg-Vorpommern
State Office for Health and Social Affairs

— Lower Saxony
State Industrial Inspection Offices

— North-Rhine Westphalia
Occupational Health and Safety Departments of the administrative distrricts

— Rheinland-Palatinate
Structure and Approval Management North or South

— Saarland
State Office for the Environment and Occupational Safety

— Saxony
Saxon Office for Occupational Safety

— Saxony-Anhalt
State Office for Consumer Protection

— Schleswig-Holstein
State Regulatory Authority at Unfallkasse Nord

— Thuringia
State Office for Consumer Protection, Regional Inspectors

Annex 2:
"Notice of pregnancy" template for the employer

Example of a file note for the employer.

Max-Planck-Institut
für < *Name* >
< Straße >
< PLZ, Ort >

Aktenvermerk
Mitteilung einer Beschäftigten über das Vorliegen einer Schwangerschaft

Frau < *Vorname, Name* >

hat uns am < *Tag, Monat, Jahr* > mitgeteilt, dass bei ihr eine Schwangerschaft vorliegt.

Nach Ihrer Auskunft ist der voraussichtliche Entbindungstermin am < *Tag, Monat, Jahr* >.

Das Institut meldet das Vorliegen einer Schwangerschaft an die zuständige Behörde. Eine Gefährdungsbeurteilung nach den Anforderungen des Mutterschutzgesetzes wird unverzüglich durchgeführt.

_____ _____

Ort, Datum Unterschrift Vorgesetzte/r

_____ _____

Ort, Datum Unterschrift geschäftsführende/r Direktor/in

Original zum Personalakt

Annex 3:
"Notice of pregnancy" template
for the responsible regulatory authority

By way of example, the form belonging to the Office for Occupational Safety of the Free and Hanseatic City of Hamburg (source: http://www.hamburg.de/contentblob/121412/65daec599cdb8bc44135ba5c4511f746/data/schwangere-meldung.pdf, date: 08.2017). For specific cases, please use the form belonging to the responsible State authority.

Amt für Arbeitsschutz
Abteilung Arbeitnehmerschutz
- Mutterschutz-
Billstr. 80
20539 Hamburg

Hamburg | Behörde für Gesundheit und Verbraucherschutz

Per Telefax an **040- 4273-10098**
Per E-Mail an **Arbeitnehmerschutz@bgv.hamburg.de**

Mitteilung über die Beschäftigung einer werdenden Mutter
gemäß § 5 (1) Satz 3 des Mutterschutzgesetzes -MuSchG-

Bitte beachten Sie, dass das Amt für Arbeitsschutz Hamburg nur zuständig für Arbeitnehmerinnen ist, die in einer Hamburger Betriebsstätte beschäftigt sind.

Name und Anschrift der Firma	
Ansprechpartner *(bei Rückfragen)*	Telefonnummer
Vor- und Nachname der werdenden Mutter	Geburtsdatum
Anschrift	Telefonnummer
Datum der voraussichtlichen Entbindung:	
beschäftigt als *(Berufsbezeichnung)*	
Beschäftigungsort, z.B. Betrieb/ Filiale/ Zweigstelle *(Anschrift)*	
Das Arbeitsverhältnis ist ○ unbefristet ○ befristet bis zum	in Elternzeit bis

Auskünfte nach § 19 (1) MuSchG

Ergebnis der Gefährdungsbeurteilung:
(gemäß § 1 Verordnung zum Schutz der Mütter am Arbeitsplatz –MuSchArbV)

Der Arbeitsplatz der werdenden Mutter wurde hinsichtlich der **Arbeitszeiten**, der Einwirkung von **chemischen Gefahrstoffen**, **biologischen Arbeitsstoffen** und **physikalischen Schadfaktoren** am überprüft. Die Gefährdungsbeurteilung liegt im Betrieb vor und hat Folgendes ergeben:

○ Eine Gefährdung liegt nicht vor. Der Arbeitsplatz wird unverändert beibehalten.

○ Gefährdungen sind möglich, deshalb

☐ wurden die Arbeitsbedingungen so geändert, dass Gefährdungen ausgeschlossen sind.

☐ wurde die werdende Mutter auf einen anderen ungefährdenden Arbeitsplatz umgesetzt.

☐ hat der Arbeitgeber ein ○ teilweises ○ vollständiges Beschäftigungsverbot (Freistellung) gemäß § 4 MuSchG ausgesprochen. Der Durchschnittsverdienst gemäß § 11 (1) MuSchG wird weiter gezahlt.

Hinweis: Bitte sehen Sie von der Zusendung der Gefährdungsbeurteilung ab.

Ein Arzt hat ein ○ teilweises ○ vollständiges individuelles Beschäftigungsverbot gemäß § 3 (1) MuSchG ausgesprochen.

Ort, Datum *Unterschrift und Firmenstempel*

Annex 4: Risk assessment "Maternity Protection in the Lab", page 1 of 3

	Risk	Assessment of risk	Measures to alleviate risks	Deadline	Effectiveness
Physical risk	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Regular lifting and carrying of between 5 and 10 kg and more than two to three times an hour	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Occasional lifting and carrying of more than 10 kg and up to twice an hour	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Physical positions and movements which may be harmful to health in pregnancy such as frequent stretching, bending, stooped positions, standing work or similar positions	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Heat from 26 to 35° C over 35° C	☐ Yes ☐ No ☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Cold under -25° C	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Wetness	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Noise > 80 dB(A) over average of 8 hours, no increase in impulse noise of more than 40 dB(A) within 5 seconds	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Vibration with a daily exposure level of > 0.45 $m \cdot s^{-2}$	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Constant standing for than 4 hours / working day	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Ionizing radiation with a dose of more than 1 mSv (= 0.001 Sievert) during pregnancy	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Time spent in the magnet room or examination room of an MRI scanner (static electromagnetic field)	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Special risk (caused by the nature of the work) of falling, slipping, falling down	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable

Annex 4: Risk assessment "Maternity Protection in the Lab", page 2 of 3

	Stress	Assessing stress	Measures	Deadline	Effectiveness
Chemical risk	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Exposure to highly toxic, toxic or harmful substances with one or more of the hazard statements H300, H301, H302, H310, H311, H312, H330, H331, H332, H370	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Exposure to carcinogenic, mutagenic or teratogenic substances with one or more of the hazard statements H340, H341, H350, H350i, H351, H360D, H361d, H362	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Contact with hazardous substances absorbed through the skin	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Biological risks	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Working with potentially infectious body fluids and secretions from humans and animals	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Working with or exposure to pathogens in risk groups 2 to 4	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Particularly high risk of occupational illness (caused by the nature of the work)	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Risk from working procedures	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Working at overpressure > 0.1 bar above local atmospheric pressure	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Heightened risk of accidents (caused by the nature of the work)	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Piecework or working on an assembly line at a prescribed tempo	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Working with animals which may pose a special risk (e.g. biting, scratching)	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable

Annex 4: Risk assessment "Maternity Protection in the Lab", page 3 of 3

	Stress	Assessing stress	Measures	Deadline	Effectiveness
Working hours	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Night shift between 10 pm and 6 am	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Overtime > 8.5 h/day or > 90 h within 2 weeks	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Work on Sundays and national holidays	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Ban on work of any kind from 6 weeks before the calculated due date unless the pregnant person has given a statement to the contrary.	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Ban on work of any kind until 8 weeks after delivery	☐ Yes ☐ No				☐ Yes ☐ No ☐ not applicable
Result of risk assessment					
Name of employee	(*Name*)				
Risk assessment produced by	(*Name, Date*)				
Designation of work station	(*exact designation*)				
The employee is not exposed to any risks in accordance with maternity protection regulations	☐ Yes ☐ No				
There is a risk or it cannot be ruled out with any certainty	☐ Yes ☐ No				
The pregnant employee has been informed of the result of the assessment	☐ Yes ☐ No				

Comments:
Risks from the following work

- "Mining work underground"
- "Working at sea"
- "Paring wood"
- "Driving vehicles"

were not included as they only lead to a ban on employment or employment restrictions if they represent the main focus of scientific activity. Going underground, a period at sea or driving a vehicle to a place of work **for scientific purposes (not for experiments on your own body!**) are not affected. In specific cases, a specialist medical assessment can be obtained.

Annex 5: List of measures for "Maternity Protection in the Lab", page 1 of 5

Type of risk or strain	Measures		
	Personnel	Organizational	Technical
Physical risk			
Regular lifting and carrying of between 5 and 10 kg and more than two to three times an hour	Ban on employment	1. Reduce frequency to max. three times / hour 2. Reduce weight to < 5 kg 3. Have work comprising critical processes carried out by different people	Use mechanical aids to handle loads
Occasional lifting and carrying of more than 10 kg and up to twice an hour	Ban on employment	1. Reduce weight to < 10 kg 2. Have work comprising critical processes carried out by different people	Use mechanical aids to handle loads
Physical positions and movements which may be harmful to health in pregnancy such as frequent stretching, bending, stooped positions, standing work or similar positions	Ban on employment with corresponding assessment	1. Perform work with changes of posture 2. Have work comprising critical processes carried out by different people	
Heat from 26 to 35° C over 35° C	Possible restriction on employment with corresponding assessment Ban on employment at this work station	1. Move to work station not affected by heat 2. Risk assessment: 3. Have work comprising critical processes carried out by different people	
Cold under -25° C	Ban on employment at this work station	1. Move to work station not affected by cold 2. Risk assessment: 3. Have work comprising critical processes carried out by different people	
Wetness	Ban on employment with corresponding assessment	1. Risk assessment 2. Have work comprising critical processes carried out by different people	

Annex 5: List of measures for "Maternity Protection in the Lab", page 2 of 5

Type of risk or strain	Measures		
	Personnel	**Organizational**	**Technical**
Physical risk			
Noise > 80 dB(A) over average of 8 hours, no increase in impulse noise of more than 40 dB(A) within 5 seconds	Ban on employment Wearing Personal Protective Equipment is not permitted as compensation	1. Reduce noise to < 80 dB(A) 2. Limit increases in noise level to < 40 dB(A)/0.5 s 3. Have work comprising critical processes carried out by different people	1. Technical soundproofing measures at the source of the noise 2. Technical soundproofing measures in the work area
Vibration with a daily exposure level of > 0.45 $m \cdot s^{-2}$	Ban on employment	1. Reduce daily exposure level to < 0.45 $m \cdot s^{-2}$ 2. Have work comprising critical processes carried out by different people	
Constant standing for than 4 hours / working day	Ban on employment after the end of the 5th month of pregnancy	1. Perform work with changes of posture 2. Have work comprising critical processes carried out by different people	
Ionizing radiation with a dose of more than 1 mSv during pregnancy	Weekly abdominal and monthly personal dosimetry Ban on employment	1. Time spent to be limited with simultaneous dosimetry 2. Have work comprising critical processes carried out by different people	
Spending time in the magnet room or examination room of an MRI scanner (static electromagnetic field)	Ban on employment	Have work comprising critical processes carried out by different people	
Special risk (caused by the nature of the work) of falling, slipping, falling down	Ban on working on ladders, in wet areas, environments with increased risk of tripping and similar risks	1. risk assessment: 2. Have work comprising critical processes carried out by different people	1. Eliminate special risks 2. Establish safe distance from hazardous working areas

Annex 5: List of measures for "Maternity Protection in the Lab", page 3 of 5

Type of risk or strain	Measures		
	Personnel	Organizational	Technical
Chemical risk			
Work involving the risk of skin absorption or exposure to highly toxic, toxic or harmful substances	Ban on working with substances with one or more of the hazard statements H310, H311, H312 or skin absorption properties	1. Dispense with these substances 2. Check alternative substances 3. Have work comprising critical processes carried out by different people	1. Spatial separation 2. Procedural separation from working areas where these substances are handled
Working with or exposure to carcinogenic, mutagenic or teratogenic substances	Ban on working with substances with one or more of the hazard statements H340, H350, H350i, H360D, H361d, H362	1. Dispense with these substances 2. Check alternative substances 3. Have work comprising critical processes carried out by different people	1. Spatial separation 2. Procedural separation from working areas where these substances are handled
Biological risks			
Working with potentially infectious body fluids and secretions from humans and animals	Ban on employment	1. Have work comprising critical processes carried out by different people	
Working with or exposure to pathogens in Risk Groups 2 to 4	Ban on employment if health of the mother or unborn child may be endangered	1. Risk assessment in accordance with the Biomaterial Regulation 2. Have work comprising critical processes carried out by different people	1. Spatial separation 2. Procedural separation from working areas where these substances are handled
Particularly high risk of occupational illness (caused by the nature of the work)	Ban on employment	1. Risk assessment in accordance with the Biomaterial Regulation 2. Have work comprising critical processes carried out by different people	
Working with animals which may pose a special risk of infection	Ban on employment	1. Risk assessment in accordance with the Biomaterial Regulation 2. Have work comprising critical processes carried out by different people	1. Spatial separation 2. Procedural separation from working areas where these animals are handled

Annex 5: List of measures for "Maternity Protection in the Lab", page 4 of 5

Type of risk or strain	Measures		
	Personnel	Organizational	Technical
Risk from working procedures			
Working at overpressure > 0.1 bar above local atmospheric pressure	Ban on employment	Have work comprising critical processes carried out by different people	Reduce overpressure to less than 0.1 bar above atmospheric pressure
Heightened risk of accidents (caused by the nature of the work)	Ban on employment if corresponding assessment applies	1. Risk assessment: 2. Have work comprising critical processes carried out by different people	
Piecework or working on an assembly line at a prescribed tempo.	Ban on employment	1. Remove / change work cycle 2. Have work comprising critical processes carried out by different people	
Working with animals which may pose a special risk (e.g. biting, scratching)	Ban on employment if health of the mother or unborn child may be endangered	1. Risk assessment: 2. Have work comprising critical processes carried out by different people	1. Spatial separation 2. Procedural separation from working areas where these animals are handled
Driving means of transport (vehicles with a drive)	Ban on employment from the 4th month of pregnancy if this is the main activity	Have work comprising critical processes carried out by different people	
Working hours			
Working between 8 pm and 10 pm	Ban on employment if the pregnant employee has not given her consent	1. Dispense with working in this period 2. Have work in this period carried out by different people	
Night shift between 10 pm and 6 am	Ban on employment	1. Dispense with night shift 2. Have work in this period carried out by different people	
Overtime > 8.5 h/day or > 90 h within 2 weeks	Ban on employment	1. Dispense with overtime 2. Have work carried out by different people	
Work on Sundays and national holidays	Ban on employment if the pregnant employee has not given her consent Observe ban on working alone	1. Dispense with work on Sundays and national holidays 2. Have work in this period carried out by different people	

Annex 5: List of measures for "Maternity Protection in the Lab", page 5 of 5

Type of risk or strain	Measures		
	Personnel	Organizational	Technical
Work of any kind	Ban on employment from 6 weeks before due date if no statement to the contrary from the pregnant employee	Have work comprising critical processes carried out by different people in this period	
Work of any kind	Ban on employment without exception until 8 weeks after delivery or 12 weeks in certain circumstances	Have work in this period carried out by different people	

Annex 6:
Structural measures

Department III at the Administrative Headquarters of the Max Planck Society, "Construction and Infrastructure" will support possible protective measures for pregnant and breastfeeding employees with suitable infrastructure at the Institutes. As a general rule, such measures will be taken into account in the planning for new buildings and conversions.

- The "Construction and Infrastructure" Department ensures that the need for structural rules for pregnant and breastfeeding employees in the lab when new buildings or conversions are planned, is discussed and documented.
- After liaising with the user on requirements, the Department also ensures that smaller lab units are kept available which enable them to be used for permitted lab work.
- For each Institute/facility, the "Construction and Infrastructure" Department and the user must define a suitable, permanently available room to which pregnant or breastfeeding employees can retire for rest periods, and which may not be used for other purposes or only in such a way that it can be used again as a relaxation room at short notice (within one working day).
- The "Construction and Infrastructure" Department will quickly clarify whether such rooms meet the Max Planck Society's funding provisions for construction work

Annex 7: Non-exhaustive list of lab and research work and their effect on the employment of pregnant or breastfeeding scientists, page 1 of 5

		Employment is ...		
	Type of activity	**permitted**	**restricted**	**forbidden**
1	**Use of Personal Protective Equipment**			
1.1	Wearing Category 1 protective equipment — protection against low risks (PPE Cat. 1), e.g. simple protective gloves, protective clothing against slight mechanical stress, glasses to protect against sunlight	**x**		
1.2	Wearing Category 2 protective equipment — protection against medium risks (PPE Cat. 2), e.g. FFP2 respirators, disposable nitrile gloves		**x** [1)]	
1.3	Wearing Category 3 protective equipment — protection against irreversible or lethal risks (PPE Cat. 3), e.g. laser safety glasses, special cold-resistant gloves for cryogenic materials, ear defenders of all kinds, fall protection, respirator independent of surrounding atmosphere			**x**
2	**Time spent in labs and cleanrooms**			
2.1	Time spent in rooms monitored for leaks in which equipment flushed with carbon dioxide is operated, e.g. opening and filling incubators	**x**		
2.2	Time spent in cleanrooms e.g. working with cleanroom clothing taking into account any individually agreed length of time to be worn, wearing overshoes only if this does not increase the risk of slipping or tripping.		**x** [1)]	
2.3	Time spent in labs in which other people are handling hazardous materials (toxic, sensitizing, CMR substances) and observance of the threshold cannot be guaranteed with certainty e.g. third parties handling benzene with lab fume hood in permanent operation			**x**
2.4	Time spent in rooms with oxygen content permanently reduced by technical means, e.g. entering IT server rooms operated with an oxygen deficit			**x**

Annex 7: Non-exhaustive list of lab and research work and their effect on the employment of pregnant or breastfeeding scientists, page 2 of 5

		Employment is ...		
	Type of activity	**permitted**	**restricted**	**forbidden**
3	**Exposure to electrical, magnetic and electromagnetic fields (static, pulsed)**			
3.1	Operating equipment with magnetic fields from spatially separated control rooms, e.g. examinations with an MRT or NMR spectrometer which can be made from a screened control room, time spent outside the 0.5 mT safety zone of the magnet of an MRT unit	x		
3.2	Time spent in exposure area 2 in accordance with trade association Rule DGUV 103-013, e.g. generally accessible working areas where there are no systems or equipment which emit electromagnetic fields/radiation	x		
3.3	Time spent in exposure area 1 in accordance with trade association Rule DGUV 103-013, e.g. working areas with microwaves or induction systems where it is permitted to stay for up to 8 hours/day		x [2)]	
3.4	Time spent in an area of higher exposure in accordance with trade association Rule DGUV 103-013, where it is a requirement to wear Personal Protective Equipment (PPE Cat. 3), e.g. access only for authorized staff and stay limited to fewer than 8 hours per working day			x
4	**Working with lasers**			
4.1	All lasers of laser safety classes 1 and 2 e.g. work with adjustable lasers in open systems	x		
4.2	All lasers of classes 3 or 4 if no requirement to wear laser safety glasses has been established, e.g. lasers in closed systems or equipment where a technical protective device securely prevents contact with the laser beam	x		
4.3	All lasers of laser safety classes 3B, 3R or 4 with requirement to wear laser safety glasses (PPE Cat. 3), e.g. working with open lasers or lasers with no shutdown system when the test setup is opened as there is an increased risk of collision or tripping when wearing laser safety glasses with a restricted field of vision			x
5	**Time spent in areas with ionizing radiation**			
5.1	Operating equipment with ionizing radiation from spatially separated control rooms, e.g. carrying out CT or NMR examinations with X-Ray equipment which can be made from a location where it is not necessary to monitor radiation	x		
5.2	Time spent in areas with radiation protection monitoring, e.g. working areas in which there is a requirement to carry a dosimeter and the body dose reached can be determined locally at any time (film dosimeters are not allowed)		x [3)]	x
5.3	Time spent in areas where there is a requirement to wear protective equipment against ionizing radiation, e.g. wearing X-ray aprons, handling open or closed radioactive sources			x

Annex 7: Non-exhaustive list of lab and research work and their effect on the employment of pregnant or breastfeeding scientists, page 3 of 5

		Employment is ...		
	Type of activity	**permitted**	**restricted**	**forbidden**
6	**Working with chemicals** [4)]			
6.1	Working with cryogenic liquids / liquefied gases if no requirement to wear special cold-resistant gloves has been established and no further risks occur e.g. moving vessels used for transport to other locations, transferring liquids and using low volumes (less than 1 l)	x		
6.2	Working with cryogenic liquids / liquefied gases if a requirement to wear special cold-resistant gloves has been established (PPE Cat. 3), e.g. filling from storage containers in Dewar vessels suitable for labs			x
6.3	Working with environmentally hazardous materials in normal laboratory volumes with the hazard statements H400, H410 or H420 e.g. handling hydrofluorocarbons, zinc oxide	x		
6.4	Working with gases under pressure, hazard statement H280, with a pressure-reducing device for extractions e.g. extraction of condensed helium from a gas bottle	x		
6.5	Transferring hazardous substances from or to containers with a capacity of less than 5 litres if the technical rate of air exchange permits the safe observance of workplace thresholds e.g. filling collecting tanks with halogen-free solvent waste, transferring acetone to 5L canisters		x [5)]	
6.6	Working with flammable or oxidizing hazardous materials in normal laboratory volumes with the hazard statements H225 or H270, e.g. handling ethanol		x [5)]	
6.7	Direct skin contact with skin-absorbent hazardous substances with one or more of the hazard statements H311, H312, H314, H315, H317, H 371, H373, e.g. handling acrylonitrile, benzene, toluene, dimethylformamide, 2-nitrotoluene			x
6.8	Working with toxic substances with one or more of the hazard statements H300/301/302, H310/311/312, H330/331/332, H370 if the workplace threshold cannot be observed with certainty e.g. quicksilver, arsenic and their compounds			x
6.9	Working with carcinogenic, mutagenic or substances toxic for reproduction (CMR substances) with one or more of the hazard statements H340, H350, H350i, H360, H361, H362 e.g. dibutylphthalate, 2,2‘-bioxiran			x

Annex 7: Non-exhaustive list of lab and research work and their effect on the employment of pregnant or breastfeeding scientists, page 4 of 5

		Employment is ...		
	Type of activity	**permitted**	**restricted**	**forbidden**
7	**Working with biological working materials**			
7.1	Working with biological materials in Risk Group RG1, e.g. specific and non-specific work with acetic acid or lactic acid bacteria (*acetobacterium* or *lactobacillus*)	x		
7.2	Working with biological materials in Risk Group RG2 only if they are non-human pathogenic biomaterials, e.g. specific and non-specific work with *mycoplasma bovis* or *ralstonia solanacearum*		x [6)]	
7.3	Working with biological materials in Risk Groups RG 3 and 3** and human pathogenic biomaterials in Risk Group RG2, e.g. specific and non-specific work with hepatitis viruses (RG 3**), third-party handling of influenza viruses (human pathogen, RG2) in the same room			x
7.4	Working with biological materials in Risk Group RG4, e.g. any kind of work without exception			x
8	**Carrying out genetic engineering**			
8.1	Working with genetically modified microorganisms in Risk Group RG1 or working in labs with safety level S1, e.g. transfer of a coat protein gene (nucleic acid fragment with no risk potential) to a cloning vector (plasmid)	x		
8.2	Working with genetically modified microorganisms in Risk Group RG2 or working in labs with safety level S2, e.g. biofilms as model system for bacterial communities; studies of the interactions between plant and bacterium		x [7)]	
8.3	Working with genetically modified microorganisms in Risk Group RG2 or working in labs with safety level S2 which have oncogenic or suppressive properties, e.g. expression of an immunotoxin for cancer therapy			x
8.4	Working with genetically modified microorganisms in Risk Groups RG3 or RG4 and working in labs with safety levels S3 or S4 e.g. any kind of work without exception			x

Annex 7: Non-exhaustive list of lab and research work and their effect on the employment of pregnant or breastfeeding scientists, page 5 of 5

		Employment is ...		
	Type of activity	**permitted**	**restricted**	**forbidden**
9	**Contact with people**			
9.1	Physical proximity to people when the pregnant employee has proven immunity to chickenpox, cytomegaly, measles, mumps, Ringel rubella or rubella, e.g. non-invasive medical or psychological examinations with possible physical contact	**x**		
9.2	Physical proximity to children under the age of 14 when the pregnant employee either has no immunity to chickenpox, cytomegaly, measles, mumps, Ringel rubella or rubella, or her immune status is unknown, e.g. non-invasive medical or psychological examinations with possible physical contact		**x** [8)]	**x** [8)]
9.3	Invasive activities, handling body secretions and fluids e.g. taking blood samples, examining stools and urine			**x**
10	**Contact with animals or research animals**			
10.1	Working with animals or research animals e.g. counting wild animals, behavioural observations with no animal contact	**x**		
10.2	Non-invasive work with living research animals, e.g. feeding, visual inspection of cages and aquariums		**x** [9)]	
10.3	Work on research animals involving particular psychological stress, e.g. killing research animals and disposing of them			**x** [10)]
10.4	Invasive work, handling the bodily secretions and fluids of research animals, e.g. dissecting animals, taking blood samples, extracting fluids, urine, stools, cleaning cages or aquariums			**x**

Comments:

1) The type of restriction must be defined individually on the basis of the specific work and working conditions.
2) The level of exposure must be individually determined on the basis of physical parameters.
3) Safe monitoring of exposure and observance of thresholds presupposed, guaranteeing termination of the work at any time if exceeded.
4) The basic rule here is: take account of possible interactions and the number of substances.
5) There is a presupposition that the requirements of BGI 850 have been met.
6) It is imperative to conduct an assessment of the pathogenicity for humans.
7) Classification must be made by the Officer for Biological Safety.
8) Depending on the age of the children and the week of the pregnancy, it is not necessary to ban this work for the entire length of the pregnancy.
9) If work can be performed with no risk of inhaling dust/aerosol or no risk of injury from the research animals.
10) This work may be performed if the risk assessment shows that there is no particular psychological stress in the specific case.