Circular No. 59/2020

Updates to the health and safety regulations pertaining to the coronavirus pandemic
- ventilation and cooling during the coronavirus pandemic -

Dear Sir or Madam,

As you have no doubt gathered from various media sources, outbreaks of coronavirus in abattoirs and meat processing factories have been associated with the practice of ventilation with recirculated air. This technology is now viewed as a possible factor in the spread of the virus. The pathogen is spread via “aerosols” which do not fall to the ground, but are maintained in the air by currents. Although the conditions of the meat industry and a university are in no way comparable, recent developments have occasioned the university management to review the ventilation/air conditioning practices on the premises of the University of Bonn. Section 4.3 Technical Services has conducted inspections pertaining to this issue, the results and consequences of which we should like to present here. The decision has been taken to display information notices in all relevant rooms relating to the type of air-conditioning/ventilation system installed and providing instructions as to their operation.

The University of Bonn facilities deploy various ventilation technologies:

1. Section 4.3 acted at the start of the pandemic to switch centrally-controlled air recirculation units to operate without air recirculation. Rooms fitted with such systems currently run on 100% fresh air supply. This means that we do not expect an increased hazard from aerosols in these rooms.
2.

In **rooms which require air recirculation cooling** (e.g. for experiments, materials testing, the removal of thermal loads etc.) the recirculation cooling devices should be set so that the circulation air flow (blast direction) is guided along the ceiling to minimize air currents and thus allow aerosols to fall to the ground. This minimizes the potential for spread of the virus. Section 4.3 has acted to determine which seminar and conference rooms, lecture halls and laboratories deploy such recirculation cooling systems. They have subjected all such systems to checks and have converted them where required. In cases in which users are able to control the air flow of recirculation cooling systems, it is imperative that such users do not undertake any alteration to the settings made by section 4.3.

An aerosol hazard cannot be ruled out in areas in which the function of the facilities which they house (e.g. server rooms, cooling cells and plant room) **cannot be provided with a fresh air supply**. As a result, all those entering these rooms are required to wear **mouth and nose coverings** and are required to restrict their **presence** in such rooms to a **minimum**.

Rooms in which such a situation is to be found often house devices operated not by section 4.3., but a University institute. Operators of such devices are required to display notices in such rooms informing of this status and display usage instructions. Appropriate notices are available from section 4.3 Technical Services. Those requiring assistance in setting the system can consult the cooling/climate/ventilation section of division 4. The contact details are listed below.

3.

In the interests of reducing hazards to those working in **rooms in which recirculation cooling systems have been installed on grounds of comfort alone** (e.g. seminar and conference rooms), these systems are to be switched off for the foreseeable future. The risk of virus transmission increases with the number of persons entering rooms, the frequency with which fresh people enter the room and the time spent in a room.

4.

**Mobile fans and air-conditioning units** may only be used in single-occupancy offices. Otherwise, those present must wear a nose and mouth cover permanently. As these systems stir up air, mouth and nose coverings are required to reduce the exhalation of aerosols. In contrast e.g. to seminar rooms, offices are used by a fixed, low number of persons, meaning a much lower virus transmission hazard.
5.

The volume of aerosols can be reduced by **correct ventilation** practices. As such, it is incumbent upon occupants of offices to ensure (as far as is possible) regular natural ventilation via windows, either through continual ventilation (windows held ajar) or intense ventilation (opening windows wide on a regular basis to let in air).

- Intense ventilation: every 60 minutes in an office or 20 minutes in a conference room
- Duration in summer: 10 minutes, in spring/fall: 5 minutes, in winter (outside temperature < 6°C) 3 minutes

You can consult the cooling/climate/ventilation section to determine the type of system installed in the rooms which you use. Please contact Mr. Frechen, extension -6736, email: Mikic@verwaltung.uni-bonn.de or Mr. Schmitt, extension -7799, email: schmitt@verwaltung.uni-bonn.de).

Please address all medical questions to the medical officers (betriebsaerztlicherdienst@ukbonn.de). Please address all health and safety-related questions to the Occupational and Environmental Safety Unit (arbeitsschutz@uni-bonn.de).

Sincerely,

Signed Professor Dr. Dr. h.c. Michael Hoch          Holger Gottschalk
Rector                                              Provost