

The Hebrew University of Jerusalem

**Guide for the care and use of animals in research and
teaching**

Version: July 2013

PREFACE

The use of animals for experimentation is in many cases required for advanced research designed for the understanding of fundamental biological phenomena and/or the discovery of practical solutions for the needs of society in the fields of health, and quality and length of life.

The Hebrew University recognizes its legal and moral responsibilities towards the animals used by its researchers in their scientific activities. These responsibilities derive, first and foremost, from the Law for the Prevention of Cruelty to Animals (Experiments on Animals) as well as other State laws, from agreements with those financing the research and out of total identification with the humane values held by the public.

It is the responsibility of the research community of the University – which until now has proven itself in this matter – to ensure that the above obligations are fulfilled.

While fulfilling its responsibilities as a statutory body, the University has acted in a variety of areas in order to help researchers carry out their obligations.

1. Appointed and activated (as described below) the "University Ethics Committee for Care and Use of Laboratory Animals", and campus committees for this purpose, thus taking on itself a heavy legal responsibility.
2. Created and activated "The Authority for Animal facilities", in which framework improvements are continually being made to the physical conditions as well as to the professional level at which the research activities on animals are being conducted.
3. With the help of the above committees, and in consultation with numerous functionaries, rules have been laid down by which University staff, visitors and all those who work on behalf of the University are obliged to abide, as described in this booklet.

Researchers acting according to the rules set down by the University will be:

1. Entitled to protection both to him/herself and the university from legal action and negative publicity.
2. Enabled to submit research proposals to the primary R&D funders with better chances of acceptance.
3. Ensured scientific quality of the animal experiment-based research at the University.

Many have contributed to the wording and composition of this publication, starting with the pioneer work of Professor Jonathan Adler ז"ל in the 1960s, through the academic and practical updating of Professor Ehud Ziv and Dr. Ronny Kalman. We are very grateful for the constructive comments and corrections from all members of the University Committee.

This booklet has been newly designed and published in cooperation with the Authority for Research and Development and the Authority for Biological and Biomedical Models.

This updated version will be permanently available on the websites of these two Authorities.

Suggestions for changes and additions will be welcomed and studied attentively by the University Ethics Committee for the Care and Use of Laboratory Animals, headed by the Vice President for Research and Development, Professor Isaiah Arkin.

Dr Eran Vardi
Director, The Authority for Research and Development

January 2013

To:
Researchers at the Hebrew University who conduct experiments on animals

Dear Colleagues,

Re: Experiments on animals: applications for approval for experiments and reports on experiments

The Law for the Prevention of Cruelty to Animals (Experiments on Animals), 5754 - 1994, and the Rules for the Prevention of Cruelty to Animals (Experiments on Animals) 5761 - 2001 requires of the University and its researchers the following:

- 1) No experiments on animals will be conducted if there are appropriate alternatives.
- 2) Animal experimentation ((vertebrates, except man) will be conducted only by a researcher who has been authorized for this work by the University Committee, and who has had training in the minimization of animal suffering in accordance with the regulations.
 - (A) A researcher so authorized who wishes to conduct experiments on animals must receive approval for the experiment from the University Committee via the Campus Committees, established according to law.
 - (B) All experiments must receive prior written approval from the Committee. For experiments designated solely for teaching, approval from the Teaching Committee must first be obtained and, following receipt of such approval, a permit must then be requested from the University Committee.
 - (C) By law, the researcher in charge of the experiment is responsible for obtaining written approval and for full reporting within the designated time period.
- 3) Experimentation on animals contrary to the regulations stated by law, or deviation from the granted approval, is a criminal offense punishable by one year in prison.
- 4) The University Committee has published its regulations, as detailed in this booklet.

Please follow all rules required by law and by University regulations, so that neither you nor the Institution will be liable to a lawsuit.

Sincerely,

Peppi Yakirevitz, advocate
Legal Counsel to the University

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NOTE:

These appendices should be used solely for the purpose of a general understanding since this booklet is updated infrequently and changes are often made to the relevant laws, regulations and rules.

When any form needs to be completed, only the updated form supplied by the Authority for Biological and Biomedical Models is to be used (either the paper or the on-line version).

I. University Policy Regarding Animals in Research and Teaching: An Ethical Attitude to Animals

We are legally, scientifically and morally responsible for all living creatures dependent on us and this includes animals used for teaching or experimentation. Therefore all persons working with animals - whether in maintenance, production, research or teaching - must ascertain that the care will always be the best available by adhering to these following three well-known principles:

- a. **Replacement:** no experiment will be conducted on animals if the scientific purpose of that experiment can be achieved by the use of reasonable alternatives, and if this is impossible, use will be made of animals which are as low as possible on the phylogenetic scale.
- b. **Reduction:** use shall be made of the smallest possible number of animals which will enable a scientifically valid result.
- c. **Refinement:** every possible means should be taken in order to minimize the discomfort and/or suffering that is caused to the animals as a result of the experiments on them.

Appropriate maintenance, minimal pain and the humane care of laboratory animals requires professional and scientific judgment, based on knowledge of the general requirements of the species, as well as the specific requirements of the research or teaching involved.

In this document, any reference to "animals" or "living creatures" is to vertebrates alone.

Suitable housing and equipment in good order are essential for the proper maintenance of animals which are being used for experiments, but of more importance is the wise judgment and genuine concern of all those who come into contact with the animals.

The Responsibility of the University

Without detracting from the responsibilities of the researcher performing experiments on animals (according to the Law for the Prevention of Cruelty to Animals (Experiments on Animals), 5754 – 1994 and according to the regulations which have been determined according to this law), the University sees itself responsible for:

- A. All activities with animals destined for research and/or teaching which are carried out on its premises.
- B. All activities with animals by University staff who are carrying out assignments beyond its premises (although not when they come under the responsibility of other Council-authorized institutions).

The responsibility for ensuring the observance of the conditions and instructions resulting from the requirements of the above law and regulations has been given by the University to the University Ethics Committee for the Care and Use of Laboratory Animals.

This committee, headed by the Vice President for Research and Development, directs the campus ethics committees for the care and use of laboratory animals, and supervises their activities, which mainly consists of granting permits to carry out specific experiments on animals. The chairs of the campus committees are members of the University Committee.

Obligatory Authorization for all Activities with Animals

Taking into consideration the obligations which derive from the laws of the State and from agreements with funders of research, and in light of the University's desire to promote research, together with its concern for the well-being of animals, the University has decided as follows:

All activities connected with animals (their reception, removal, care and experimentation*) which is carried out on University premises by anyone who is present on these premises (as well as by University employees and those acting beyond its premises on the University's behalf), will be performed only after prior written authorization by the authorized functionary:

1. The campus ethics committees for the care and use of laboratory animals are authorized to give permission for the conduct of specific experiments on animals on their campuses and/or by researchers from these campuses.
2. The administration of the Authority for Animal facilities is authorized to permit the introduction of animals into the University, their reproduction, their removal from the University and their ongoing maintenance.

The above-mentioned requisite authorizations are obligatory both on all researchers who are carrying out research and on all those responsible in the University for the laboratories and apparatus with which work on animals is carried out.

*In the above-mentioned approach of the University, the term "experiment" includes any activity using animals whose purpose is the generation of information from the animals or from their interaction with the environment (including: experimentation, observation, preparation for observation, examination, etc) for the purposes of research and/or instruction.

II Committees: Their Composition and Fields of Responsibility

In the Hebrew University, responsibility for the subject under discussion is divided, as described below, between the following job descriptions:

1. Chair and members of the University Ethics Committee for the Care and Use of Laboratory Animals
2. Chair and members of the Campus Ethics Committees for Care and Use of Laboratory Animals
3. Chair of the Authority for Animal facilities and Director of the Authority for Animal facilities who is also the University Veterinarian
4. Researchers who conduct experiments on animals.

The University Ethics Committee for the Care and Use of Laboratory Animals

This Committee is headed by the Vice President for Research and Development and includes, amongst others:

The Chairs of the Campus Committees as described below.

The University Veterinarian, who is also the Director of the Authority for Animal facilities.

A researcher whose research is not based on animal experimentation

Director of the Authority for Research and Development (who also acts as coordinator for the committee)

One of the members of the committee serves as acting chair in the event of the chair person's absence.

The Committee convenes at least twice a year on dates determined by its chairperson.

The Role of the Committee is to ensure that the research and teaching activities, including the care and use of laboratory animals, carried out in the University are done according to the rules of the Prevention of Cruelty to Animals Law (Experiments on Animals), the regulations of the Council for Experimentation on Animals, and the rules of the University as regards the ethics of the care and use of laboratory animals.

The committee thus ensures that the following regulations are followed:

The organizational arrangements are put in place throughout the entire University, thereby entitling the University to the authorization of the Council:

1. In the physical arrangements, coordination of the required standards:
 - A. In the Animal facilities
 - B. In the Animal Breeding Houses
 - C. In the laboratories of the researchers
 - D. In the animal transportation conditions
2. In the organizational arrangements set out below, which comply with the requirements of the law:
 - A. The setting of rules and updating instructions, and their dissemination to all those involved.

- B. The composition and functioning of the campus committees
 - C. Supervisory activities, enforcement and reporting (to the University's administration and to the Council)
3. All workers in the University, and all its students who take care of the animals and/or carry out experiments, must be authorized to do so, on the basis of appropriate training.
 4. All experiments conducted by the institution's staff and students must only be done after authorization, according to procedures which have been laid down and according to the necessary criteria.

The Committee constitutes the highest authority of the institute for the purposes of decisions about exceptional cases and discussions of appeals on verdicts of the Campus Committees.

The Chair of the Committee is responsible for its functioning and for representing the University in contacts with outside bodies in connection with this subject.

The list of names of the current members of this Committee and their addresses is given in Appendix 4.

Any member of staff and any student in the Hebrew University is entitled to apply directly to any one of the members of this Committee with a request for information, or to express criticism, complaint or suggestion for improvement in reference to the implementation of the Animal Protection Law and the rules of the University in the field of ethics of the care and use of laboratory animals.

Campus Ethics Committees for the Care of and Use of Laboratory Animals

The University has three campus committees:

- A. The Edmond Safra Campus, Givat Ram – this Committee is responsible for these matters at the Faculty of Science, the Psychology Department (situated on the Mt Scopus Campus), and the Marine Laboratory in Eilat. The Dean of the Faculty of Science, in consultation with the Dean of the Faculty of Social Sciences, appoints the members of the committee.
- B. The Ein Kerem Campus – the Committee is responsible (in collaboration with the Hadassah hospitals) for matters concerning the Faculty of Medicine, the Faculty of Dental Medicine and Hadassah Hospital, in Ein Kerem and Mt Scopus, (and today, also the School for Veterinary Medicine in Rehovot).
The Dean of the Faculty of Medicine, in consultation with the Dean of the Faculty of Dental Medicine and Hadassah Hospital administration, appoints the members of the committee.
- C. The Rehovot Campus, the Faculty of Agriculture, the committee is responsible for this subject in the Faculty of Agriculture.
The committee is appointed by the Dean of the Faculty of Agriculture.

The head of the campus committee, who is appointed by the relevant dean, is a researcher from one of the departments on the campus, and the committee's members (which must number no less than five) include, amongst others:

A researcher who conducts experiments on animals

A veterinarian, with a qualification in expertise in laboratory animal medicine or with such authorization from the Veterinary Services

If possible the committee will also include a representative of the general public who is neither involved with animal experimentation, nor an employee of the university.

One of the members of the faculty committee will act as a substitute for the chairperson in the case of his absence.

The committee convenes at least three times a year, on dates set by the chairperson.

The Role of the Campus Committees

The campus committees implement in practice the prerogatives (for agreements, permits and authorizations) that have been granted the University by the Council for Animal Experimentation, and they supervise the carrying out of the commitments made by the University in accepting these prerogatives.

The Campus Committee is responsible for:

1. The examination of requests for permits to carry out experiments on its campus, and the granting of such requests on the understanding that they are in accordance with the relevant rules and regulations.
2. The examination of requests by researchers, lab technicians and students for training in the care and use of laboratory animals, and the granting of such requests on the understanding that they comply with the relevant rules and regulations.
3. Supervision of the laboratories and animal facilities which are on the campus (with respect to the conditions under which the animals are held and the way in which the experiments are performed). Reports on this must be submitted to the University Committee (at least once a year). The inspection will be made with the help of the vet of the Authority for Animal facilities, using the forms given in the appendices.
4. Approval of the relevant section of the annual and bi-annual reports submitted to the Council.
5. Documentation and archiving of its activities (minutes of meetings, requests, permits and reports) for a period of time to be set by the University Committee.
6. The transmission of relevant professional and administrative information to researchers which will assist them in carrying out their responsibilities.

The chairperson is responsible for the functioning of the campus committee. He also participates in the University Committee meetings and contributes to its activities by representing the unique aspects of the campus and by reporting on the activities of the campus committee.

The chairperson is allowed to create sub-committees made up of certain members of the committee in order to implement the committee's tasks. A sub-committee which is activated for the granting of experimentation permits will consist of at least three members, of which at least one will be an expert/accredited vet and at least one a researcher who carries out animal experimentation. The University Ethics Committee for the Care and Use of Laboratory Animals may set regulations that rule on a different composition of the sub-committee, for various activities. In any event, it is the chairperson of the campus committee who has the responsibility and the related authority on whether to create a sub-committee and on its decisions.

The operating procedures of the campus committee and of its sub-committees will be articulated and/or updated, in writing, by its chairperson, on the understanding that it accords with the rules set down by the University Committee (as described in Appendix 5), and these procedures will be available for inspection in those Animal facilities which are under its supervision. They will also be on the website of the Authority for Biological and Biomedical Models and of the academic units which are in its field of responsibility.

It should be made quite clear that, after a refusal to permit a certain experiment has been discussed for a second time by the full committee, there can be no further appeal!

The Authority for Biological and Biomedical Models

The Authority for Biological and Biomedical Models (hereinafter ABBM) is the joint operational framework for the University animal facilities from the administrative, budgetary and professional aspects. Its chairperson is a senior researcher who is appointed by the President (who also chairs the Authority's Board). The director of the ABBM is a veterinarian who is an expert, or who has accreditation for supervising work with laboratory animals, and who acts as the University Veterinarian.

The ABBM is responsible for the practical aspects of the University's fulfillment of its responsibilities in connection with animals as follows:

1. The adaptation of the infrastructure (physical, human, organizational) of the ABBM to meet the mandatory requirements and standards.
2. To confirm that the services provided by the ABBM are only provided to those who are authorized (by the Ethics Committee for the Care and Use of Laboratory Animals) to deal with animals in the University.
3. To train the staff of the ABBM for authorization and instruction in relevant matters (the routine functioning, inspections, problems that arise and exceptional events).

4. Updating of the relevant work procedures (whilst integrating the instructions of the Council and of the University Committee), and their effective dissemination to the relevant bodies.
5. To arrange for instruction on decisions of the University Ethics Committee for the Care and Use of Laboratory Animals, and to ensure that the decisions are carried out.
6. Administrative assistance for both the campus committees (equipment and office supplies, office services, centralized documentation of the permits and authorizations as well as of inspections and their documentation) and for the University Ethics Committee for the Care and Use of Laboratory Animals (supplying data and preparing the annual reports for the Council).
7. Preparing the reports which the University is required to make to the Council on Animal Experimentation, and presenting them following their approval by the relevant campus committee.
8. Reporting on changes in the animal facilities (to the local/campus committee, with a copy to the University Committee).
9. To develop, maintain and operate the interactive system for dealing with experimentation requests.
10. To supply animals to the researchers only in accordance with a valid experimentation permit.

Researchers who Perform Experiments with Animals

It is basic tenet that researchers may conduct their investigations according to their understanding in the framework of academic freedom that is granted them.

With regard to experimentation on animals, their basic responsibility is derived from the Animal Protection Law (Experimentation on Animals), 5754 – 1994, and from the regulations which have been added to it, as well as from the rules laid down by both the Council on Animal Experimentation and the Hebrew University (in its guidelines). The responsibility of the researcher is to know the law, its regulations, the rules and the guidelines and to work according to the relevant clauses.

From the point of view of the University, and without detracting from its legal obligations, the responsibilities of the researchers are expressed in the following requirements:

1. To ensure that they and those working on their behalf in the maintenance and the carrying out of animal experimentation will have the appropriate University authorization which permits them to do this work.
2. To ensure that their work with animals (including their transportation) is done only with apparatus which has received the approval of the University authorities.

3. To conduct only those experiments which have received approval in advance from the Ethics Committee for the Care and Use of Laboratory Animals.
4. To give instructions to those working on their behalf on how to act in unexpected irregular situations (break-downs, inspections, etc.)
5. To provide detailed documentation on their activities in this aspect of their research and to keep this documentation available for inspection for a period of at least two years from the conclusion of their research in the framework of which these experiments were conducted.
6. To report, as soon as possible, to the campus committee on any break-down, exceptional circumstance or problem that becomes apparent in connection with their activities.
7. To ensure that the introduction or removal by them or on their behalf of any animal into or from the University premises is done only after receiving the appropriate permission.
8. To ensure that their plans for the use of animals are backed by a sufficient budget to allow for the completion of their research, as planned.

III. Authorizations, Permits and Agreements

In order to comply with the requirements of the law, the University has laid down the following rules:

1. Individual authorization for maintenance or for conducting experiments on animals of a specific species.
2. The authorization of a specific site as being appropriate for maintenance or animal experimentation of a certain type.
3. To authorize specific animals to be either brought in or removed from University premises.
4. To permit the conduct of specific experiments on animals.

A. Personal Authorizations

As laid down by the Animal Protection Law, no-one is allowed to carry out actions with animals on University premises, or on its behalf outside its premises, without receiving approval which, from the University's point of view, establishes their competence for the conduct of this activity on animals from that species.

The granting of this approval resides with the chairs of the campus ethics committees for the care and use of laboratory animals, according to their understanding and following the rules which have been laid down by the University Committee.

Current types of authorization (described in detail in Appendix 6) are as follows:

1. Authorization for a member of staff or student of the University to take care of a specific species of animal.
2. Authorization for a member of staff or student of the University to carry out animal experimentation on a specific species of animal.
3. Temporary authorization (for 6 months) for an employee, student or visitor to the University to carry out animal experimentation on a specific species of animal in the framework of research, under the responsibility of the head researcher and under his supervision, and on the condition that the researcher has the above-mentioned (point No. 2 above) authorization.
4. Authorization for a student to carry out animal experimentation of a specific kind in the framework of his studies, in a course which has received ethical approval from the ethics committee for the care and use of laboratory animals, and under the supervision of a member of the teaching faculty who has the above-mentioned (point No. 2 above) authorization and while he is present during the activities.

Anyone wishing to receive authorization for himself, for an employee under his responsibility or for a student (including visitors from abroad) should apply to the chairperson of the campus committee, or to the director of the ABBM.

Anyone who has the necessary authorization is requested to have the document available for presentation when an inspection is being made.

As required by the law and its regulations, authorization is usually based on professional training at an academic level in the realm of ethics of animal experimentation. The director of the ABBM is responsible for this training, as described below.

Visitors from abroad who do not speak Hebrew will receive special help and guidance material in English (as described in Appendix 10).

Clarification: the validity of any of the above authorizations automatically expires the moment its recipient ceases to be a staff member, a student, or a visitor to the University. The exception to this rule is in the case of a senior member of the University academic faculty whose authorization will not expire on his retirement, so long as he continues to carry out research within the University and with its approval.

B. Authorizing a Site as Suitable for the Maintenance and Experimentation on Animals

According to the law, sites for work with animals on the University's premises are under the supervision of the Council, and their suitability for such activities is a condition for the University's authorization by the Council. Therefore, any new or renewed site where animal activities are being planned requires prior authorization by the Council. The responsibility for this procedure is with the director of the ABBM. No activity is to be carried out using animals in an unapproved site.

C. Authorization for the Introduction or Removal of Specific Animals to/from the University Premises

In principle the introduction of any animal into, or removal from, the University can only be done via the working procedures of the ABBM. In the case where a researcher wishes to either bring in or remove an animal from the University premises without going through these ABBM procedures, he should make a written request for permission from the director of the ABBM prior to so doing. See Appendix 18 which should be used for this purpose.

D. Permit for Specific Animal Experimentation

In granting a permit for the carrying out of a specific experiment, the University is utilizing its core authority which has been granted it by the Council according to the law. The procedure for granting a permit is the most common activity of the committee, but at the same time the most important and sensitive, and it must therefore be carried out with the utmost care.

A researcher who wishes to apply for a permit for a certain experiment should forward his request (via the interactive system which has been set up for this purpose) to the chairperson of the campus committee (or his administrative assistant) of the campus on which the research would take place. The content of the information included in the form which is completed using the interactive system is displayed in Appendix 11. It contains, amongst others, all the data fields required by the Council. The computerized form includes various aids for managing the input, as well as sources of information regarding the data which needs to be inserted.

The request will be examined according to the rules that were laid down by the University Committee and in this framework all the principles that are laid out below, in Part IV, will be in place.

There must be a minimum of three members for the discussion of any permit request to take place, and at least one of them must be a vet with expertise or with accreditation, and at least one must be a researcher who himself performs animal experimentation.

The researcher seeking a permit will be given professional advice by the members of the committee who are discussing his request and will be allowed, as far as possible, to correct his research program and/or his request so that it will satisfy the conditions for authorization.

The examination process and the alterations may be repeated and only requests which, in the opinion of the committee, properly meet the requirements and conditions will be approved. The permit will be worded in English and signed by the chair of the campus committee.

The permit for experimentation will be considered valid only for experiments which are carried out in complete accord with the declarations in the request.

Permits for experiments on primates will be given to researchers who request them only after the request has been authorized by the chair of the University Committee.

In the case in which a request was denied by the chair of the campus committee, the researcher may appeal this decision to the University Committee. The University Committee will check that the examination process for this request was carried out according to the correct procedures, but will not permit an experiment which has been denied by the campus committee.

The reference number of the permit should be used by the researcher when ordering animals for the purpose of the authorized experiment. The researcher must retain both the request and the permit for at least two years from the conclusion of the research in which framework the experiment was conducted.

IV. OPERATING PRINCIPLES FOR THE HEBREW UNIVERSITY ANIMAL HOUSES

Principle	Details
<p>1. The Animal facilities are administered as a single entity for the whole university and provide services to the entire research community keeping a practical watch on the needs of research, the well-being of the animals and the maintenance of the highest ethical and professional standards.</p> <p>2. The animal facilities will be managed as efficiently as possible while ensuring both that the previous clause is adhered to and that there is equality amongst all users of the organization. Thus there will be the maximum concentration of animal facilities on the different campuses.</p>	<ul style="list-style-type: none"> • Setting and maintaining defined microbiological standards. • Strive to maintain the SPF level at the (mostly) rodent animal facilities. • Separation of animals between the rooms according to their various uses (pathogens). Separation of animals between rooms according to the requirements of the regulatory bodies (no two species in one room). • Strive to include all animal facilities in the AAALAC system. • Optimum use of space will be made regarding occupancy and use of the organization's resources. Each animal house will serve researchers from different departments and not just from the building in which it is situated. Rooms will also be allocated where irregular conditions are to be kept, for instance, alterations in the light-dark cycle, the exposure of animals to controlled sources of stress, enriched environment, etc. • The decision as to which researcher may make use of the animal house rests with the ABBM from a holistic approach to the University's needs. The Authority will, of course, act with the needs of the researchers and their geographic situation in mind. • The predicted size of a research group, the special needs of the research and academic

<p>3. Any place in which animals are kept on University premises for the purpose of research will be defined/recognized as an animal house of The Authority for Animal facilities. The administration, maintenance and operation of such animal facilities will be by the Authority.</p> <p>4. The establishment of a new animal house will be done only after prior coordination with the Authority for Animal facilities.</p> <p>5. The routine care of the animals will be carried out by Authority personnel.</p> <p>The researcher is responsible for carrying out all the research work and for following up on the animals during the course of the research.</p>	<p>considerations will be the deciding factors for the need for a separate animal house or for an annex in the existing animal house.</p> <ul style="list-style-type: none"> • The activity of the animal facilities will be on the principle of first come, first served, i.e. equality of service with no special privileges. • Staff will not be assigned to a specific animal house but will be directed according to professional considerations. • Large animals: the professionalism of the staff and operating costs will be the prime consideration for the centralization of the large animal units. • Quarantine is an example of centralized service in one site. • There will be no "private" areas for specific researchers, nor "private" arrangements. An example of the problem: the research arrangement for zebra fish of Dr Adi Inbal was set up using absorption grants without the knowledge of the Authority, while there were other researchers interested in this field who had no arrangement for their needs. • The bird pavilion is an example of the opposite: the creation of a new unit in collaboration and coordination with the Authority. • When considering the establishment of a new animal house (as opposed to the use of the existing animal house), two
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<p>6. Scientific work with animals will be carried out, as far as possible, within the bounds of the animal facilities. Taking the animals out (with the intention of returning them) may be done only in cases where the research cannot be conducted within the animal house, and only after approval from the Authority.</p> <p>7. Scientific work with animals requires a high level of professionalism and the use of considerable resources. Therefore every effort should be made for the consolidation of resources in order to ensure that the most efficient use is made of scientific equipment.</p> <p>8. Payment by the users will only be for actual use, according to the price list of the Authority.</p>	<p>aspects must be taken into consideration: the academic context and research needs for the animals in the unit which is planning it on one hand, and on the other, the budgetary aspect and additional costs which would be involved.</p> <ul style="list-style-type: none"> • Every effort is made to prepare suitable areas, to train skilled personnel and acquire appropriate equipment for carrying out most of the research that takes place in the animal facilities. As a result, the University animal facilities have to include allocation of a significant percentage of their area for a variety of experimental procedures (such as surgical and genetic procedures, physiological, metabolic and behavioral measurements), and for the maintenance of animals in non-standard experimental conditions. • Every effort must be made for the scientific equipment that is purchased to be of a similar model to interdepartmental equipment, thus facilitating its maximum use and enabling the use of expensive apparatus by researchers who do not have the ability to independently purchase equipment. • University/Authority personnel should be given appropriate training to enable them to provide
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	<p>services such as imaging or behavior.</p> <ul style="list-style-type: none">• Users will be debited only for the services received from the Authority.• The Authority price list will be unified for a specific service in all animal facilities (eg the maintenance of an SPF cage).• The Authority price list will be unified for a specific service for all user groups (eg University researchers who pay from University budgets – ARD, University researchers who pay from Yissum budgets, Hadassah researchers, outside bodies, etc.).• The University administration via the Authority bears responsibility for establishing and equipping animal facilities, as well as their maintenance when income from use will be in a deficit.
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V. PRINCIPLES FOR THE CONDUCT OF ANIMAL EXPERIMENTATION AT THE UNIVERSITY

In addition to the three principle requirements (Replacement, Reduction, Refinement) as decreed by law and described in the introduction on page 7, all those who work in the name of the University are required to adhere to the rules as set down below:

1. No experiments on animals will be made on the premises of the Hebrew University by its staff or by its agents who work outside it, other than according to the instructions in this document.
2. Experiments on animals are conditional upon a prior written permit from the campus ethics committee for the care and use of laboratory animals.
3. It is absolutely forbidden to either permit or to undertake duplicate experiments (according to the Council description), and where a partner (scientific or business) is involved, steps must be taken to ensure that they follow this requirement.
4. Responsibility for the experiment rests with the chief researcher. It is up to him/her to ensure that the researchers and technicians who act with the animals on his behalf are suitably trained, and he/she is responsible for reporting to the campus committee and for the adherence to the rules.
5. Only those who have been especially trained and who have written authorization from the institution, via the ethics committee for the care and use of laboratory animals, may conduct experimentation on animals.
6. All experiments and treatments must be conducted under the supervision of a veterinarian with expertise (or with authorization from the Veterinary Services) who will be available to those carrying out the experiments for advice and guidance, and will ensure the health and well-being of the animals.
7. Surgical procedures (including anesthesia) on cats, dogs, pigs, sheep/goats, cattle or primates will be carried out solely in the presence of the vet.
8. A repeat experiment on an animal will be permitted only after special authorization has been granted by the committee which will act in this regard according to the rules of the Council.
9. Animals may be used for teaching purposes solely after receiving authorization for this from the committee, as described in Part VIII.
10. Experiments on animals that are likely to cause pain, suffering or discomfort, as well as all types of surgical procedures, will be carried out using general anesthetics, local anesthetics or analgesia according to accepted veterinary practice. Use must be made of reference books or the advice of the vet should be taken regarding the protocol for anesthetics or analgesics appropriate for the type of animal and the procedure being carried out.

11. The conduct of painful experimentation involving relaxation of central or peripheral muscles is forbidden except under general anesthetic.
12. Animals recovering from surgery need to be given treatment for pain relief, and for this the advice must be taken from the above-mentioned vet.
13. If the use of anesthetic or analgesic materials is contrary to the purpose of the experiment, the experiment may be carried out solely after receiving authorization for this from the committee, while ensuring the use of alternatives to reduce pain and suffering.
14. Use of physical restraints is to be made for as short a period of time as possible, and only after the use of other means which do not cause so much distress, have been rejected or proven to be ineffective.
15. It is permitted to carry out sample bleeding (up to 10% of the total blood volume, over a period of two weeks), without the need for analgesics or anesthetics. In the case of massive bleeding above 10% of total blood volume during two weeks, or terminal bleeding, the animal must have anesthetics before the bleeding. In the case in which the massive bleeding is not terminal, the advice must be taken of the vet regarding the return of the blood supply that has been removed or another alternative measure.
16. Any animal which is suffering from chronic pain, or from long-lasting discomfort, or from an irreparable defect (where these situations are not a necessary part of the experiment), will be euthanized.
17. Euthanizing animals must be carried out by trained personnel in a way that minimizes pain and is as fast as possible, using one of the accepted methods. See Appendix 14 for a partial description of methods of euthanasia.
18. When an animal is to be euthanized at the end of an experiment, this must be done as soon as possible before his return to consciousness.
19. As far as possible, at the end of an experiment it is the responsibility of the researcher to see to the euthanization of the animals – and then to prepare them and seal them in plastic bags and bring them to the designated site. If the animals are not euthanized, then it is up to the researcher to ensure that they are supplied with food and water.
20. No permission will be given in the University for LD50 experiments (except with the permission of the Council).
21. Experiments on primates will be conducted and permitted with the recommendations of the Council in this matter.
22. Experiments in which the presence of pyrogenic toxins is being investigated will be permitted and carried out while in compliance with the recommendations of the Council in this matter.

23. Permission will not be given by the University, nor will experiments be carried out, involving cleaning agents.
24. Permission will not be given by the University, nor will experiments be carried out, involving cosmetics, unless this is otherwise granted in writing (by the Pharmacology Department of the Ministry of Health) as being designed for medical purposes.
25. Giving information about the use of laboratory animals – including principles, policies, rules, guidelines and practical instructions – as well as their actual use in practice, will only be done in coordination with the internal committee and with the University spokesperson.
26. All experiments are subject to Israeli law and no revocation or deviation is allowed, either in principle, or in the general policies or in the practical instructions for their conduct. Knowledge of the law is the requirement of everyone using animals and no-one in the University in any position whatsoever, may relieve him/her of that responsibility.

VI. TRAINING FOR RESEARCHERS, PERSONNEL AND STUDENTS

A basic condition for authorization to care for certain types of animals and/or carry out experiments upon them, is successful training and appropriate ongoing education.

The University provides a number of programs for ongoing education in this subject for the benefit of its employees and students, and for training for veterinarians and researchers from its faculty staff. These further education programs have been authorized by the Council, according to law.

Further training has been divided into four categories:

1. A course which is generally carried out in relation to rodents and rabbits for the correct and ethical use of animals.
2. Specialized training is given for experiments on specific animals, for example on cats, chickens/fowl, or pigs (conditional on (1)).
3. Theoretical training in which the ethical considerations are put to students who are going to be meeting with animals in the teaching laboratories.
4. Training meetings for the chairs of the campus committees.

The design of courses and training according to decisions made by the University Committee, as well as their execution, are within the responsibility of the ABBM.

Updated information on the courses and training can be obtained from the secretary of the ABBM.

A list of courses and their details is given in Appendix 7 of this document.

VII. ADMINISTRATIVE ASPECTS OF THE USE OF ANIMALS

The work rules relating to the administrative aspects of the use of animals in the University (ordering, maintenance, transportation, removal, and bringing in and taking out of the University) are designed, of course, to facilitate researchers to carry out their research in the best possible way. However, the rules are subject to three important considerations:

1. They must be in keeping with the requirements of the law and regulations.
2. The protection of the health of both humans and animals.
3. Efficient use of resources.

For these reasons, all the administrative actions relating to animals in the University are carried out either by the ABBM or under its supervision, as described below.

The Ordering of Animals

As a general rule the procurement of animals is carried out by the ABBM which supplies the needs from its own sources or from outside suppliers. Most of the external suppliers with whom the Authority works are authorized suppliers (i.e. those whose professional abilities and whose adherence to the required standards have been tested by the Authority and found appropriate for the needs of University research).

The services provided by the ABBM, including the prices of animals, are approved from time to time by the board of the ABBM.

The ABBM allows researchers to make their orders interactively through the Authority's website. (<https://animals.ekmd.huji.ac.il>)

Detailed instructions on the ways to order, on the various tracks, and on the conditions and length of time for supply can be found on the ABBM's website and Appendix 17 below.

In the case of orders from unauthorized suppliers (eg: bringing in animals from another research institution which is collaborating), this must be coordinated with the Authority in advance on how the order is to be made and what is to be the delegation of responsibility for its being carried out. Detailed instructions can be found on the website of the ABBM and in Appendix 18 below.

The issue of animals to a researcher will be done only according to the balance of authorized animals remaining in the valid experiment permit.

The Addition of Animals through Reproduction in the University

Sometimes a researcher is interested in adding individuals that are the result of breeding, either naturally or artificially, to the animals kept either by him or for him.

Reproduction of animals may be a part of an experiment or a means by which to obtain animals with specific characteristics. In view of our legal obligations and the the relevant administrative requirements, animals which are born within University

premises are considered to have been brought into the University and as such must be coordinated prior to the event with the ABBM and, after the event, must be reported. Animals which are born in the University will be offset from the experiment authorization, as relevant.

The Transportation of Animals

As a rule, bringing animals either into or out of the University will be carried out by the ABBM, by its own means or by its approved service providers.

Animals will be transported with the utmost care for their well-being. Transportation will be solely with the use of specially designated vehicles and will be carefully done so as to ensure no unnecessary loading and unloading. Air transportation will be carried out in accordance with the rules of IATA.

Animal Maintenance

A. In general:

During the course of an experiment, animals will only be kept in animal facilities controlled by the ABBM, or in another facility which has received prior approval. Every effort must be made to conduct experiments in the work rooms of the animal house itself. If this is impossible, animals may be taken out of the animal house, but only with the approval of the manager of the animal house. An animal which has been removed from the animal house may not be returned to it except with the express permission of the animal house manager. After treatment, the researcher or technician must ensure that there is water and food in the cage. Newborns which have not been euthanized/sacrificed immediately upon arrival in the animal house will be ordered and kept only with a nursing mother and not left alone (one nursing mother to every ten newborns). Entrance to the animal house and work in it are permitted only to authorized staff or when accompanied by an authorized staff member.

B. Cages:

All animals including monkeys, pigs, small ruminants, dogs, cats, rabbits and small rodents will be kept according to international conditions (NRC, and/or regulations of the Council for experiments with animals).

An identification card will be displayed on every cage in which the following details will be stated:

Date of reception of the animal at the animal house; the permit number for carrying out the experiment; the researcher's personal authorization code, name of the researcher, details of the animal (species, sex, date of birth), and the number of animals in the cage.

Exceptional Maintenance Agreements

Researchers who need separate rooms away from other researchers because of special requirements (biohazard, unusual hours of daylight, use of special apparatus, etc) will be able to receive them after prior coordination with the director of the ABBM. These rooms will be given for a limited time, as arranged in advance. Researchers who will be themselves handling the animals (because of special requirements or because of pathogens) will carry out the treatment following coordination with the ABBM. In any case of exceptional maintenance or treatment, an agreement in writing will be drawn up between the animal house and the researcher.

The Removal of Animals at the End of an Experiment

In order to minimize the dangers of the spread of infections which may affect other animals in the animal house as well as personnel themselves, certain rules must be followed regarding the removal of animals and cages at the end of an experiment.

The rules to be followed are:

A. The Removal of Dead Animals

1. The animals must be placed by the researcher into plastic bags and put into the designated freezers for later disposal by the ABBM.
2. The cages, including the sawdust in them, must be taken by the researcher to the disposal area which will be assigned for this purpose.
3. In special circumstances (pathogens, radioactive material, etc), the researcher will place the bodies of the animals, as well as the sawdust, into plastic bags and hand them over to staff at the animal house. No more than 20 rodent carcasses are to be placed in one bag. An identification label as well as a label giving the researcher's name must be put onto the bag. All this must be coordinated in advance with the person in charge at the animal house prior to carrying out these instructions.

B. Removal of Rodents which have to be Destroyed

1. The cages containing the rodents which are to be destroyed must be clearly so marked by the researcher.
2. The identification label on the cage is not to be removed, and water and food must be left in it.

C. Removal of Rabbits which have to be Destroyed

1. At the end of the experiment the rabbits will be sacrificed/ethanized by the researcher, according to the protocol which has been approved by the Ethics Committee. This will be done by the researcher by the injection of an overdose of penthal/nembutal into the vein, or by the injection of ketamine xylazine into the muscle until deep sleep/disorientation, followed by death using CO₂.
2. The researcher should ensure that the rabbit's death has taken place by checking the breathing or the pulse, then put the animal into a sealed plastic bag, securely tied, and take it to the freezer which is situated outside the unit.

When death is the result of terminal bleeding/exsanguination under anesthetic, the researcher will ensure that the rabbit is dead by injecting an overdose of the anesthetic material.

The Removal of Animals (while still alive) Outside the University Premises

There are usually two circumstances in which animals are taken out from the University premises:

1. Taking animals for the purposes of research at another institution (collaboration, transporting unique specimens, etc).
2. Transporting animals (mainly monkeys) on which the experiment has come to an end and which may now be given for rehabilitation.

Any transfer of animals outside the University should be done only with permission from the director of the ABBM, and will be carried out according to the stipulations in the specific permit authorization.

In every case, in addition to the above, it must be ensured that the transfer of responsibility for the animals is handed over to the relevant official in the organization in which the animals are to be received.

All necessary coordination will be done by the director of the ABBM with the receiving organizations.

VIII. PROTECTION OF PERSONNEL FROM SECURITY HAZARDS

1. According to University rules, any member of staff who begins to work with animals for the ABBM must complete health forms and will receive the necessary appropriate immunization or treatment.
2. Anyone who comes into contact with animals on behalf of the University must become informed of the principle diseases which can be passed to man from those animals with which he works, and must take the best possible preventive measures to protect himself from such infection,.
3. All members of staff working with dogs or cats must be aware of the instructions for the prevention of rabies, and act according to them.
4. Any animal which has been injected, ordered or treated with radioactive materials must be kept in a special area assigned for this purpose in the animal house. The researcher must coordinate the conduct of the experiment, and the storing and clearing of waste, with the staff member responsible for radioactive safety and with the manager of the animal house.
5. The introduction of any chemical preparation from a biological source destined for injection (tissue concentrate, cell culture, or the liquid for their growth, isolated segments from cell culture, etc) must be reported by the researcher to the manager of the animal house, and will be carried out only after receiving written approval.
6. Biological preparations which are dangerous to man because they consist of contaminating elements which are pathogens for humans or are suspected of being in contact with such elements, will not be injected into animals for experimentation without receiving authorization in writing from the safety committee of the University and from the directorate of the ABBM.

IX. USE OF ANIMALS FOR INSTRUCTION

According to the Law for the Protection of Animals (Experiments on Animals) 5754 - 1994, the conduct of experiments on animals is permissible for the purposes of instruction. This is, of course, on condition that this aim cannot be obtained by reasonable alternative means, and subject to minimizing both the number of animals to be used, and their suffering.

The University strives to keep its high quality of teaching, while taking into consideration the personal beliefs and sensitivities of the students.

In light of this, the University has set dedicated policy rules designed for the use of animals in teaching, as follows:

1. The responsibility for adhering to University rules and for all legal and ethical obligations in connection with animals (in particular, requests for an experimentation permit) rests with the senior member of faculty who is responsible for any teaching activity (including, amongst others, lectures, demonstrations, laboratory practice) in which use is made of animals. In this context it is worth mentioning that an experiment permit for teaching will be given for one year only.
2. In addition to the above-mentioned regulations and all other regulations derived from Clauses 11(c) 1-13 (c) of the Animal Protection Law, all those responsible for teaching which involves the use of animals are bound by the following obligations:
 - A. Presenting the content of activities for approval of the Faculty Teaching Committee, while taking into consideration Clause C below.
 - B. The University yearbook and other publications presented to students which describe potential studies and professional training at the University will, where relevant, mention the use of animals.
 - C. Students should be given ethical training prior to receiving authorization for work with animals.
3. University courses (including parts thereof) which use animals are divided into the two following categories:
 - A. Courses whose goal is to train students in the treatment of animals and/or the carrying out of experiments* on them. In relation to such courses, the University recognizes the vital importance of the use** of animals for the purpose of teaching, and the only reservation is in the adherence to the law and to the rules of the University.

It should be pointed out in this connection that prior authorization from the Council for Experimentation on Animals must be obtained for courses designed for the training of University personnel and/or students in the conduct of experiments (under the responsibility of the ABBM).
 - B. Courses whose aim differs from (A) above, and whose use of animals is intended solely to demonstrate to students known phenomena which are recorded in the literature. In relation to these courses, the University prefers the reduction (as far as possible without harming the purposes of instruction) of the use of animals. In this connection, the University encourages its teachers to prefer, as far as possible, alternative methodologies (for instance: computerized simulations).

4. The decision concerning the nature of the course and the critical necessity of the use of animals in it will be made by the teachers responsible for these courses, the relevant teaching committees and the Rector.
5. All those responsible for relevant courses which use animals are invited to turn for advice to the chairs of the campus ethic committees for the care and use of laboratory animals.

* In this context, the term "experimentation on animals" is any action whose purpose is the gathering of data and/or information from a live animal which harms its health and/or feelings, and where such actions are not done in order to heal or to improve its quality of life. This term also includes observation and measurement.

** In this context, the term "use" relates to the experiment as well as to the examination of carcasses or organs and body parts of the animal. Despite the fact that the Animal Protection Law refers to live vertebrates, the responsibility which rests on the person responsible for the course refers to all animals and not just to animals when they are still alive. The person responsible must ensure that all types of animal, whether alive or dead, will receive serious dignified restrained treatment and that handling them will be done with consideration for the sensitivities of the students.