

# BASEL DECLARATION Annual Report 2010–2011



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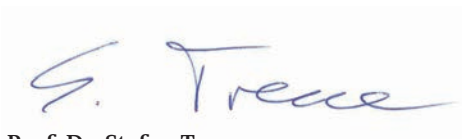
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## EDITORIAL

### «The time is ripe for greater transparency»

Research means taking responsibility for the future. One of our key tasks as scientists is to remain engaged in the high-quality research that is essential for unraveling the mysteries of diseases such as cancer, diabetes and Alzheimer's. Many of these research studies would not be possible without animal experiments – despite the existence of new alternative methods. But for us as scientists, responsibility also means recognizing the challenges of the future and devoting our efforts today to the most urgent questions of tomorrow.

How can we pursue new avenues in order to replace animal experiments as far as possible? About a year has passed since we met in Basel and adopted the declaration. In the meantime, more than 700 researchers worldwide have signed the declaration – and thus committed to greater transparency and extreme care in research using animal experiments. Our approach is already bearing fruit, because we now also see not only the scientific community, but also the general public being more closely involved in the discussion. The Basel Declaration of 2010 was a milestone in the debate on animal experiments. What have we done since this declaration was adopted? What have we achieved together? What issues still have to be addressed? One year later, we can now taking stock with this annual report



**Prof. Dr. Stefan Treue**  
Director  
Primate Center Göttingen



**Prof. Dr. Michael Hengartner**  
*Dean of the Faculty of Mathematics and  
Natural Sciences, University of Zurich*

## THE INITIATORS

### «Forschung für Leben», Switzerland

«Forschung für Leben» (or «Research for Life») is an association without any party political or confessional allegiance that was established for promoting dialogue between the general population and the research community in the field of biosciences. It provides information on the objectives, the importance and the latest results of biomedical research and thus addresses not only the benefits, but also the risks of research in a simple and clear way. The association also aims to help cope with the ethical problems arising out of biomedical advances and thus improve the relationship of trust between researchers and the lay public.

[www.forschung-leben.ch](http://www.forschung-leben.ch) / [www.recherche-vie.ch](http://www.recherche-vie.ch)

**«Forschung für Leben gives researchers in Switzerland a voice. As members of the association we network throughout Switzerland and actively seek dialogue with the general public in order to provide transparent information on the importance of research in the life sciences.»**

*Prof. Dr. Rolf Zeller, Department of Biomedicine at the University of Basel and Vice-President of «Forschung für Leben»*

### Senate Commission on Animal Protection and Experimentation of the DFG (German Research Foundation)

The senate commission advises governments, parliaments and authorities at EU, federal and local state level on questions of legislation and informs the general public about the need for animal experiments in basic research. It provides its expertise for statements on animal experiment issues and advises researchers faced with queries and problems. The DFG (German Research Foundation) is a private institution for the self-administration of all branches of science in Germany. Members are research-intensive universities, non-university research institutions, scientific associations and science academies. The DFG is funded to a large extent by the federal and local state governments, which are represented in all approving bodies. [www.dfg.de](http://www.dfg.de)

**«We help researchers comply with the right of society to comprehensive and comprehensible information – so that everyone understands the huge importance of research using animal experiments for the health of humans and animals»**

*Dr. Cornelia Exner, Executive Secretary of the Senate Commission on Animal Protection and Experimentation*

## BASEL DECLARATION – WHO IS BEHIND IT?

The Basel Declaration is a call for greater trust, transparency and communication with regard to research involving animal experiments. The declaration was adopted on 30 November 2010 during the Basel conference «Research at a Crossroads» attended by 80 researchers in the life sciences from Switzerland, Germany, Sweden, France and Great Britain.

**«The Basel Declaration came about not in response to any specific occasion, but as a spontaneous voluntary commitment by the scientific community to the best-possible approach to indispensable animal experiments. We present a picture of our modern animal experiment-based science, the deliberation process, the basic conditions and our approach to the issue of animal experiments and show openly what we do and why.»**

*Prof. Dr. Stefan Treue, Director, German Primate Center, Göttingen*

The researchers from the field of the life sciences who signed the declaration are committed to greater responsibility in animal experiments – these are planned and carried out with utmost care within their field of responsibility. In particular, the signatories commit to the principle of the 3Rs (Replace, Reduce, Refine). In other words, wherever possible they replace research using animal experiments with innovative methods, reduce the number of animals used and reduce the level of constraint on the animals through constant refinement of the experimental methods driven on by active research. The inform society openly and transparently about animal experiments and thus actively show that science and animal welfare are not incompatible. Through more trustworthy dialogue with the general public, and also with national

and international decision makers they make a constructive contribution toward an unbiased social dialogue. In return, the signatory researchers expect society to recognize that animal experiments are indispensable for medical and scientific progress today and probably will be in the future as well.

Already in the first months since its adoption, more than 700 researchers mainly from Europe and the US, but also from Asia, Australia and South America, have committed their active support for the principles of the declaration – and more are signing up to it every day.

**«The aim is for as many researchers as possible to learn of our initiative and affiliate themselves with it. We invite all colleagues and the general public to accept this offer of a genuine dialogue and to really live this Basel Declaration.»**

*Prof. Dr. Michael Hengartner, Dean of the Faculty of Mathematics and Natural Sciences, Institute of Molecular Biology, University of Zurich*



## **BASEL DECLARATION – WHY?**

### **Supporting pillar of biomedical progress**

The acute and future challenges for the health of humans, pets and livestock place enormous demands on science. Animal experiments play a crucial part in helping to transfer pioneering discoveries in basic biological research to applied research. They have a key function for the discovery of life processes, the elucidation of diseases and the development of new medical procedures for humans and animals: Animal experiments were directly involved in 75 of 98 research studies that have won the Nobel Prize for Medicine and Physiology.

**«The high quality of medical care today would not have been achieved without research in animal experiments. It is important to inform society about the major significance of research using animal experiments for the health of humans and animals.»**

*Prof. Dr. Burkhard Ludewig, Director of the Medical Research Center, Institute of Immunobiology, Kantonsspital St. Gallen*

The principle for every animal experiment is that constraints and benefits must be weighed with the objectives of the research and that only essential experiments are permitted. This applies to the whole spectrum of applications. The Basel Declaration points out that research cannot be separated into so-called basic research and more applied research and that such a distinction is also not ethically justified. Applied research is always built on the foundations of basic research findings.

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*Fig. 1: (from left) Prof. Dr. Michael Hengartner, Dean of the Faculty of Mathematics and Natural Sciences, University of Zurich, Dieter Imboden, Prof. of Environmental Physics in the Department of Environmental Sciences at the ETH Zurich and Prof. Dr. Stefan Treue, Director of the Primate Center, University of Göttingen*

*Fig. 2: Marisa Jacobi, PhD, MER at the University of Geneva, signs the Basel Declaration*



## REDUCE, REFINE, REPLACE

**«Systematic literature searches for animal experiments help to avoid their unnecessary duplication and thus reduce the number of laboratory animals used. Our search filter for studies using animal experiments for the PubMed database improved the results and efficiency of our searches and helped to reduce animal experiments by 37% - without compromising the scientific quality of our work. For 2011 we are aiming to achieve a comparable reduction through, amongst other things, the maximum possible use of the latest technology, such as modern imaging procedures.»**

*Prof. Dr. Merel Ritskes-Hoitinga, General Director of the Animal Laboratory and 3R Research Centre Radboud University Nijmegen Medical Centre*

Almost every medical procedure has a long history of research using animal experiments. But researchers are aware of their responsibility toward the animals and use alternative methods wherever possible. They only carry out animal experiments if absolutely essential. Through the 3Rs principle (reduction, refinement, replacement) they try to reduce the use of and constraints on animals. A strong commitment to 3R guarantees the best science and the best welfare of the animals.

**«Basically we have long regarded the principles behind the Basel Declaration as a matter of course, because no researcher performs animal experiments unnecessarily. The Basel Declaration establishes a platform for us on which we can network internationally in order to demonstrate this to the public more clearly still. The message is evidently getting across: For the first time we are now engaged in sustained dialogue with representatives of critical organizations in a spirit of genuine partnership that bring all sides together more than any extremist slogans do.»**

*Prof. Dr. Rolf Zeller, Department of Biomedicine at the University of Basel and Vice-President of «Forschung für Leben»*

## Rats and mice alone are not enough

Better genetic disease models are necessary to meet the most important medical needs of our society. Genetically modified animals in which specific genes have been added or removed serve as models for diseases in humans and animals. In the case of mammals, these are primarily mice and rats. It is hoped that genetically modified lower organisms, such as fruit flies, laboratory worms and fish, will one day be able to replace all mammals in research involving animal experiments. They therefore play an important part with regard to the 3R principles.

**«Rodents - mostly genetically modified - are the most important animal models for basic studies. But to translate promising results into clinical use, animal models are needed that are closer to humans in terms of anatomy and physiology. For various reasons, the pig is especially suitable. Advances in the characterization of the pig genome and in efficient and cost-effective transgenic technologies will further increase its importance.»**

*Prof. Dr. Eckhard Wolf, Chair for Molecular Animal Breeding and Biotechnology at the Ludwig Maximilian University in Munich*

Research in non-human primates has led to the development of crucial medical treatments because of the close relationship of these animals to humans. This research will remain indispensable in the foreseeable future, e.g. for personalized medicine and neurodegenerative diseases in an aging society. This also is also acknowledged in the EU Directive of 2010 on animal experiments (2010/63/EU). Any categorical restriction on research in non-human primates would be short-sighted and is not justified by any scientific evidence.

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*Fig. 3: Animals also help other animals, like these at a Faculty of Veterinary Medicine*

**«The German animal welfare act must be modified by the end of 2012 in order for the EU directive on animal experiments to be implemented. It is a question of precise wording and consistent ethical principles. A general ban on certain experiments or on any research in various animal species would surrender the clear ethical principle of weighing the benefits against potential harm, and it would do so to the advantage of artificial limits that cannot be scientifically justified.»**

*Prof. Dr. Stefan Treue, Director, German Primate Center, Göttingen*



Fig. 4: These cats enjoy playtime and cuddles

## **ENHANCED COMMUNICATION FOR GREATER TRUST**

The suitability and legitimacy of animal experiments are constantly the subject of public debates. Society often fails to recognize the added value of research, although it directly benefits from the research in the form of new medicines and consequently a higher quality of life. The correlation between basic research and the vaccine used to immunize an individual is not anchored in the public consciousness. This leads to a lack of trust and acceptance and too little support – from politicians, industry and society.

**«We realize that society funds our research and has a lot of justified questions on the subject of animal experiments and on research in the life sciences. Our aim is to engage in an in-depth, sustained and transparent dialogue. This reduces anxieties and promotes acceptance of views – on both sides.»**

*Prof. Dr. Michael Hengartner, Dean of the Faculty of Mathematics and Natural Sciences, Institute of Molecular Biology, University of Zurich*

The signatories to the Basel Declaration therefore commit to provide the public with objective information in order to achieve a deeper understanding of research involving animal experiments. This includes discussions on scientific results and controversies, on processes and approval procedures, on the use of primates, on the risks of approaches to research and on the possible misuse of newly developed technology.

**«The Swiss National Science Foundation endeavors to ensure that the financial and legal conditions are ideal for Switzerland as a research center. It also provides the public with guarantees that the public funds it allocates are being used for good research in accordance with the highest ethical principles. The Basel Declaration supports us in these efforts.»**

*Prof. Dr. Dieter Imboden, President of the Research Council of the Swiss National Science Foundation*



## THE ACTIVITIES OF THE BASEL DECLARATION 2010–2011

Formulation and adoption of the Basel Declaration End of November 2010 at the international conference «Research at a Crossroads» with more than 80 participants in Basel.

Several dozen international media outlets and publications – including prestigious journals and daily and weekly newspapers – report on the declaration.

(Links to the articles can be found at [www.basel-declaration.org/media-echo](http://www.basel-declaration.org/media-echo))

At a meeting in Lausanne in November the 3R Research Centre (3RRC) of Radboud University Nijmegen in the Netherlands presents its new offer of post-doc training. The 3RRC also presents new 3R methods: on the occasion of an Interpharma meeting in Basel in December 2010, at the International Council for Laboratory Animal Science ICLAS in Turkey in June 2011 and at the World Congress on Alternatives in Montreal in August 2011. In February 2012 the 3RRC will organize the first International Symposium on Systematic Reviews of Animal studies and a one-day «learn how» workshop. The basis is the search filter developed by 3RRC for literature searches in the PubMed database, which is helping to establish systematic reviews of animal studies as the new gold standard. This filter allows research results already available from animal experiments to be found, evaluated and collated more easily. The number of laboratory animals can thus be reduced and the quality of further animal experiments improved at the same time.

At five universities (in Basel, Zurich, Bern, Geneva and Fribourg) around 200 interested people meet at the Forschung für Leben conference on 3 February 2011 to discuss with university representatives why animal experiments are essential for research.

The «Animal-free Research» foundation for animal rights turns to the Basel Declaration to discuss what the two organizations can do together in order to standardize methods of characterization and measurement of the potential toxicity of nanomaterials and thus to make them more meaningful and comparable.

«School meets practice» – all-day large group discussions with experts for senior-grade high-school pupils in Germany. Pupils from a given year explore a controversial, emotional issue fairly, outside the normal learning environment, and form their own, qualified opinion on the basis of open and balanced information.

[www.tierversuche-in-der-forschung.org](http://www.tierversuche-in-der-forschung.org)

The dialogue forum for animal experiments with members from various scientific disciplines and fields of practice seeks interdisciplinary dialogue with interested sections of the public on animal experiments and alternatives in a trusting environment that is receptive to results. [www.tierversuche-in-der-forschung.org](http://www.tierversuche-in-der-forschung.org)

In May, the Basel Declaration is presented at the 4th continuing education event for animal welfare officers organized in Berlin by the Society for Laboratory Animal Science GV-SOLAS. The subject of the conference was PR work by animal welfare officers.

In September, roundtable discussion «Knowledge protects animals» during the 49th scientific conference of the Society for Laboratory Animal Science GV-SOLAS in Dresden. Members of the forum from the fields of research using animal experiments, animal husbandry, alternative methods, ethics and approving authorities present for discussion potential improvements for all groups of people involved in animal experiments.

Presentation of the Basel Declaration at the annual conference of the Neurosciences Society of Göttingen, at the Primate Neurobiologists Meeting in Göttingen, at the meeting of the Management Board of the Health Research Section of Germany's Helmholtz Association and on many other occasions by Prof. Dr. Stefan Treue, Director, German Primate Center, Göttingen.



## THE 1ST BASEL CONFERENCE – A REVIEW

In November 2010 a two-day conference was held in Basel for the first time, in which more than 80 international scientists took part to exchange ideas and experiences on the subject of research using animal experiments. This was also the founding occasion of the declaration, when the researchers called for greater trust and transparency when dealing with animal experiments. At the same time, dialogue with the general public was to be intensified. The aim of the researchers is to engage in a discussion that is as far as possible objective and based on facts. In what is mostly an emotional debate on animal experiments, the 1st Basel conference thus marks a turning point: Researchers are engaged in active communication – to gain greater acceptance among the population at large and to make their motivation and their method easier to understand. The aim is for the general public to recognize the added value that research actually generates – and from which humans benefit day in day out thanks to new medicines and a higher quality of life.

### What was the reaction to the Basel Declaration?

Besides the participation of numerous media representatives during the conference, the event was also followed up with extensive media coverage. The daily press and online media from Germany and Switzerland reported on the conference and the declaration in great detail, and the tenor of most articles was balanced. In important daily media such as the Frankfurter Rundschau, Neue Zürcher Zeitung, Berliner Zeitung and the Westdeutsche Allgemeine the main actors among the scientists were frequently cited and were also represented in the follow-up reporting with statements. Regional TV and radio stations broadcast reports on the conference; Deutschlandfunk also placed a podcast on the internet. Numerous articles and researcher statements were also published by prestigious scientific media such as the Medical Tribune and Nature. Consequently, the subject was taken up on many online portals. Bloggers and animal rights activists worldwide engaged in very intensive and at times critical discussions on the subject. In all channels, the numerous media reports provided for a sustained discussion on animal experiments and the Basel Declaration. The well-known TV journalist and moderator Ranga Yogeshwar also commented on the Basel Declaration in an interview with Spektrum der Wissenschaft. The media reaction, which lasted several months, finally reached a new peak in February, when the news magazine Focus published a four-page report.

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Fig. 5: Species appropriate animal housing for our mice as well

## Evaluation of content in the media reports:

The tone of most articles was down to earth; in 36 of 38 articles from November to December 2010, the subject of animal experiments was discussed with some sophistication. Only a few isolated blogs (2-3 entries) attacked the researchers and called the key conclusions of the conference into question. The reaction among the readers differed widely: The editorial offices received a few readers' letters, mostly critical, complaining that the articles were pro-research. Especially the contributions on animal welfare portals declaimed against the «pharmaceutical and science lobby», but the arguments were highly simplistic.

### KEY MESSAGES

«Biomedical research must commit to a responsible approach to laboratory animals and engage in an unbiased dialogue with the general public.»  
(in 24 of 38 articles)

«Animal experiments are indispensable if we are to achieve progress in biomedical research.»  
(in 18 of 38 articles)

"Animal experiments are only used if there are no scientifically tested alternatives.»  
(in 17 of 38 articles)

«The public mood, not objective criteria, leads to restrictions on research using animal experiments.»  
(in 13 of 38 articles)

«The new EU Directive makes an arbitrary distinction between applied research (good) and basic research (bad).»  
(in 13 of 38 articles)

«More restrictive laws in EU countries lead to an exodus of research to regions with weak controls.»  
(in 11 of 38 articles)

«Extremism jeopardizes the system and society.»  
(in 7 of 38 articles)

«Germany of all countries must explain the benefits of research using animal experiments in order to remain competitive in biomedical research.»  
(in 3 of 38 articles)



Fig. 6: The first signatories of the Basel Declaration in Basel

## THE BASEL DECLARATION LIVES

The second international conference entitled «On the path to greater transparency in animal experiments» will take place in Berlin on 17 and 18 October 2011. In the Science Forum at the Gendarmenmarkt, local students and an international research community will meet with politicians, media representatives and also – for the first time – with animal rights organizations and non-governmental organizations. The follow-up event to the 1st conference in Basel is evidence the researchers are continuing the dialogue with the public and thus living up to the commitments they made in Basel. At the same time, there is to be broad-based communication: For the first time in Germany the various opinion groups will meet together around a table to discuss laboratory animal research and possible alternatives.

**«Berlin will be a further landmark for the Basel Declaration. We can present it to political decision makers there and also find further international support and thus underpin the initiative more firmly in the European Community and perhaps worldwide.»**

*Dr. Cornelia Exner, Executive Secretary of the Senate Commission on Animal Protection and Experimentation*

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Fig. 7: The animal technicians do everything to ensure the wellbeing of the animals



Scientists have a major responsibility in the debate that is taking place in society. They do not just work in the peace and quiet of their labs so that they can then make a name for themselves within their closed academic circle. Instead they need to take part in the public dialogue and help to shape it. About a year after the formulation of the Basel Declaration research is once again at a crossroads: What can be done to counter the predicted rise in the number of animal experiments? How can the principles of the 3Rs (reduce, refine, replace) be implemented in the long term?

**«The meeting in Berlin shows that the Basel Declaration is not a one-off exercise. The engagement to which we have committed is a lasting one. It is an ongoing transparent dialogue with all stakeholders and a consistent ongoing effort to reduce, refine and replace animal experiments.»**

*Prof. Dr. Rolf Zeller, Department of Biomedicine, University of Basel and Vice-President of «Forschung für Leben»*

Researchers and animal welfare organizations are working together to come with answers to the following questions:

- How can the 3R principles to reduce, replace and refine animal experiments be best embedded in basic research?
- How can training and continuing education be ideally adapted to today's needs for mobility and what recommendations are there on this question for EU regulatory authorities in the EU?
- What criteria make sense for assessing degrees of severity in different species and also in genetically modified species?
- Is it any use and does it make sense to communicate negative research results? What do generally comprehensible summaries contribute to the public dialogue?
- How will the visibility of PR work on the subject of animal experiments be improved in the scientific community and in society?

## OUR PUBLICATIONS

You can find our short, easy-to-read, illustrated articles on the importance of animal experiments for biomedical progress on the website [www.basel-declaration.org](http://www.basel-declaration.org) under «Publications»:

### MAUSBLICK

**Mausblick #1:** Far fewer deaths from AIDS thanks to research – animal experiments are indispensable here-

**Mausblick #2:** In vitro fertilization (IVF): Monumental progress of IVF – from animal to humans

**Mausblick #3:** A new approach in the treatment of Alzheimer's to transgenic mice

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## BASEL DECLARATION

### A call for greater trust, transparency and communication in animal research

*Adopted on 29 November 2010 at the first Basel conference «Research at a crossroads»*

#### FUNDAMENTAL PRINCIPLES

**We, the undersigned, shall:**

01. Respect and protect the animals entrusted to us and not inflict unnecessary pain, suffering, or harm to them by adhering to highest standards of experimental design and animal care.
02. Consider carefully whether research involving animals addresses questions of importance that cannot be answered using alternative methods.
03. Strive to minimize the number of animals used for research and use the most suitable species to achieve the intended gain of knowledge.
04. Encourage collaboration to avoid repetition of animal experiments.
05. Implement the highest standards for protection of environment and public health.
06. Balance the interests of patients and society with our responsibility towards the animals when developing genetically modified animals.
07. Implement the highest standards of education and training for all persons who work with animals and monitor their compliance with standards on a regular basis.
08. Adequately recognize the important engagement of scientists in their efforts to promote the public understanding of science.
09. Promote the dialogue concerning animal welfare in research by transparent and fact-based communications to the public.
10. Provide advice based on scientific knowledge and expertise to political decision makers and government authorities on issues of research involving animals and their welfare.

**We, the undersigned,**

01. Stress that biomedical research cannot be separated into 'basic' and 'applied' research; it is rather a continuum stretching from studies of fundamental physiological processes to an understanding of the principles of disease and the development of therapies.
  02. Encourage free and transparent communication to avoid unnecessary duplication of research.
  03. Insist that necessary research involving animals, including non-human primates, be allowed now and in the future.
  04. Ask that new laws and regulations only be introduced when they are the result of an objective, democratic discourse that is based on facts.
  05. Request that society and lawmakers condemn the acts of radical groups that resort to unlawful means or violence against the research community under the pretense of animal protection.
  06. Invite representatives of animal welfare organizations to discuss openly all important issues with the research community.
  07. Encourage efforts to increase science education in public schools.
  08. Ask opinion makers, the media and teachers to discuss sensitive issues concerning research involving animal research in an impartial manner and to promote a balanced dialogue with researchers.
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