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Meeting Report

Animalfree Research Forum 2019: Animal-free Education

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Animalfree Research is a foundation based in Switzerland that supports the research and implementation of the 3Rs principles, with a focus on the replacement of animal experiments. The foundation strives to distribute knowledge about alternative methods and seeks an open and respectful dialogue between the different stakeholders. Every year, Animalfree Research organizes a forum to discuss a topic of high scientific and societal relevance among researchers, students, policymakers, and the interested general public. The 9th Animalfree Research Forum was held on October 31, 2019 in Zurich, Switzerland on "Animal-free Education" (Fig. 1).

Dr **Silvia Frey** (Executive Director, Animalfree Research) opened the Forum with an outline of the foundation's main working areas such as research funding, policy work, and education. She highlighted the fact that although the number of animals used for educational purposes is much lower than for example in basic scientific research, the real numbers are certainly higher in Switzerland than the reported statistical figures as the Swiss animal experiment statistics only represent those animals that are protected by animal protection legislation. In Switzerland, with a few exceptions for invertebrates, this legislation only considers vertebrates. Four presentations by internal and external speakers followed.

In the first talk, Dr **Miriam Zemanova** (Scientific Associate, Animalfree Research) introduced the background of the Forum



Fig. 1: A leaflet announcing the topic of the Forum



Fig. 2: Dr Miriam Zemanova provided an overview of the current status of animal use for educational and training purposes

(Fig. 2). Animals have been used as anatomy learning tools by artists and scientists for millennia. The practice of animal use for education and training might, therefore, seem like a practice of the past, but thousands of animals are still being used every year for the purpose of teaching. Dr Zemanova highlighted the statistics of animal use for educational and training purposes in Switzerland and the European Union. The numbers within the European Union vary considerably among countries. For instance, in 2017, 3,108 animals were used in Austria, 11,785 in Spain and 53,121 in Germany. In Switzerland, on average 7,500 animals have been used every year for education and training purposes since 1997. Dr Zemanova also presented initiatives of Animalfree Research in education. In particular, she introduced the results of a pilot survey among high-school teachers in Switzerland aiming to ascertain the teachers' experience with high-school dissections and their attitudes towards animal-free alternatives.

Prof. **Andrew Knight** (Professor of Animal Welfare and Ethics and Founding Director of the Centre for Animal Welfare at the University of Winchester) shared his personal experience with veterinary education and his successful endeavor to finish his studies without the harmful use of animals. Prof. Knight explained that even though animal use that results in harm or death of the animal has been an integral part of veterinary training, there are now many non-harmful alternatives, such as high-quality video or computer simulations, cadavers from ethical sources, preserved specimens, non-invasive self-experimentation, simulators, and supervised clinical or surgical experiences. He elaborated on each of these humane teaching methods and provided specif-

ic examples of their use. Animal shelter sterilization programs, in which students neuter homeless animals under the supervision of experienced veterinarians, represent an important part of veterinary surgical courses. Furthermore, he systematically reviewed several studies investigating learning outcomes and found that well-designed humane alternatives often perform just as well as methods relying on harmful animal use, and in some cases provide even better learning outcomes. Prof. Knight also stated that due to the distress that some students may experience when participating in harmful animal use, educational benefits of such exercises can be compromised. Moreover, the majority of veterinary students are required to harm and kill animals during their training but receive little formal education on animal welfare issues or critical reasoning. This might result in veterinary students' perception that they have to harm and kill animals to become veterinarians and that animal welfare concerns are not as important as human interests.

Nick Jukes (Coordinator of InterNiche, the International Network for Humane Education) in his presentation pointed out that the majority of conventional animal use has been harmful, including dissection of purpose-killed animals, animal experimentation, and other instrumental animal use. InterNiche defines harm as any action, deliberate or otherwise, that impinges on an animal's current or future well-being by limiting or denying the freedom to live, freedom to express full natural behavior, or freedom from pain, injury, and disease. Mr. Jukes pointed out that full replacement of the harmful use of animals in education and training is possible. The statement that animal experimentation is the "real



Fig. 3: The Executive Director of Animalfree Research, Dr Silvia Frey (left), with the Forum speakers (from left to right): Dr Miriam Zemanova (Animalfree Research), Nick Jukes (InterNiche), Prof. Andrew Knight (University of Winchester) and Prof. Christa Thöne-Reineke (Freie Universität Berlin)

thing” and alternatives are not is a myth that confuses the method with the objective. Rather, the “real thing” is the effective gaining of knowledge, skills, and attitudes, and animal experimentation is only one of the methods by which that objective can be reached. Mr. Jukes addressed the need for multiple levels of skills acquisition and provided an overview of the successful implementation of alternatives to harmful animal use in education. He also mentioned that the lessons in animal welfare might be negated by harmful teaching methods. In contrast, alternatives to harmful animal use provide a win-win solution with multiple positive impacts including sustainable development. Fortunately, alternatives are gaining momentum and could soon become the norm.

Prof. **Christa Thöne-Reineke** (Director and Professor at the Institute of Animal Welfare, Animal Behavior and Laboratory Animal Science at the Freie Universität Berlin) explained that alternative approaches in education provide excellent refinement of animal use. She introduced the work of the Vet Skills Lab at the Freie Universität Berlin, which consists of three learning sta-

tions: Manual Skills Lab, Social Skills Lab, and Scientific Skills Lab. Veterinary students acquire skills through three levels of training: general, special, and advanced competences. Within the Skills Lab, students have the chance to develop new models and train the maintenance or improvement of their skills while reducing the number of animals used and refining the indispensable use of animals.

A fruitful discussion between the audience and the invited speakers concluded the Forum. The event was very well received by the participants and paved the way for further work and collaborations in replacing the harmful use of animals for educational and training purposes. We thank all the speakers for sharing their experience and the results of their work (Fig. 3).

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