

The 3Rs Award 2022 goes to Prof. Guillaume Andrey (University of Geneva)



Prof. Guillaume Andrey
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The Swiss 3RCC has awarded Prof. Guillaume Andrey from the University of Geneva (UNIGE) the **2022 3Rs Award** in recognition of his work to reduce the use of transgenic animals in developmental studies through the implementation of a technique called tetraploid aggregation.

The work of Prof. Guillaume Andrey in collaboration with the transgenic core facility of the UNIGE Faculty of Medicine makes a substantial contribution to the reduction of animal experiments by the adaptation and further development of a replacement method called *tetraploid aggregation*. Tetraploid aggregation is a method that avoids the necessity of breeding mice to get specific genetic configurations. Scientists studying development in mammals traditionally rely on crossing groups of mice with single genetic changes to obtain cells, embryos or animals with multiple genetic changes. Such crossings generate many animals and embryos with genotypes that may not be of use for experimentation, so-called surplus animals. The use of *tetraploid aggregation* in two recent publications (Rouco et al. 2021; Darbellay et al. 2023), has

proved to reduce the animal use by a factor five compared to the traditional approaches. Through this recognition, Prof. Andrey and his colleagues hope to serve as an example that encourages others in the Swiss research community to reduce animals used in developmental research and other studies requiring transgenic animals.

The Swiss 3R Awards

The Swiss 3RCC presents two 3R prizes for work conducted in Switzerland each year—the Swiss 3RCC's 3Rs Award and a Young 3Rs Investigator Award. The 3Rs Award of CHF 4.000.- is granted for outstanding work that significantly advances the 3Rs Principle—Replacement, Reduction, and Refinement of animal experimentation. The Young 3Rs Investigator Award, of CHF 1000, is granted to researchers who have made significant contributions to the 3Rs principle in the early stages of their careers.

Applications are evaluated based on the quality of the contributions and on their impact on the 3Rs in either a scientific, regulatory, industrial, or educational context. In addition to the financial award, awardees are given the possibility to have a short video made about his/her activities contributing to the implementation of the 3Rs and/or to present his/her work in a 3R-dedicated event organized by the 3RCC. With their research, the awardees not only help promote the 3Rs principle, which aims to replace, reduce and refine animal experiments, they communicated their projects in an exemplary manner to encourage other researchers to adopt these approaches in their work.

Applications are screened internally and subsequently evaluated by three independent, 3Rs experts that assess the application and translatability, the 3Rs impact, as well as the communication and dissemination of the nominated work. In 2022 the three jury members consisted of one German, one American and one Swiss expert, all with long-standing experience in the 3Rs field.

References:

Rouco, R., et al. Nat Commun 12, 7235 (2021). <https://doi.org/10.1038/s41467-021-27492-1>
Darbellay, F. et al., bioRxiv 2023.05.10.539849. <https://doi.org/10.1101/2023.05.10.539849>

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