



## Forscherinnen für Förderung von Alternativen zu Tierversuchen ausgezeichnet

4. September 2019 | Stephanie Engeli  
Themen: Gesellschaft | Schadstoffe | Institutionelles

**Zwei Eawag-Forscherinnen sind vom 3R Kompetenzzentrum Schweiz (3RCC) mit dem 3RCC Award 2019 für ihre besondere Forschungsarbeit ausgezeichnet worden. Mit ihrem Projekt haben die Forscherinnen erstmals einen Toxizitätstest mit gezüchteten Kiemenzellen von Fischen ISO-zertifizieren lassen können. Dies ist ein Meilenstein in der Förderung von Alternativen zu Tierversuchen. Der Preis ist am 2. September in Bern übergeben worden.**

Seit Jahren untersucht die Eawag Alternativen, um Tierversuche mit Fischen zu reduzieren und ersetzen. Eine davon beinhaltet Versuche mit einer Kiemenzelllinie der Regenbogenforelle. Mit den im Labor nachgezogenen Zellen lässt sich die akute Toxizität von Wasserproben und vielen Chemikalien für Fische zuverlässig bestimmen. Im Frühjahr 2019 wurde dieser Toxizitätstest ISO-zertifiziert ([wir berichteten](#)).



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.&nbsp;D.; Haupt,&nbsp;T.; Hermens,&nbsp;J.&nbsp;L.&nbsp;M.; Hultman,&nbsp;M
.&nbsp;T.; Laue,&nbsp;H.; Lillicrap,&nbsp;A.; Mlna?íková,&nbsp;M.; Natsch
,&nbsp;A.; Novák,&nbsp;J.; Sinnige,&nbsp;T.&nbsp;L.; Tollefsen,&nbsp;K.&nbs
p;E.; von Niederhäusern,&nbsp;V.; Witters,&nbsp;H.; Župani?,&nbsp;A.; Sch
irmer,&nbsp;K.' (470 chars) title => protected'Repeatability and reproducibility of the
RTgill-W1 cell line assay for predi
cting fish acute toxicity' (101 chars) journal => protected'Toxicological Sciences' (22
chars) year => protected2019 (integer) volume => protected169 (integer) issue => protected'2'
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attractive
alternative method to the conventional approach using juvenile and adult fi
sh. The rainbow trout (<i>Oncorhynchus mykiss</i>) cell line assay with RTgi

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RTgill-W1 cells has been designed for this purpose. It quantifies cell viability using fluorescent measurements for metabolic activity, cell- and lysosomal-membrane integrity on the same set of cells. Results from over 70 organic chemicals attest to the high predictive capacity of this test. We here report on the repeatability (intralaboratory variability) and reproducibility (interlaboratory variability) of the RTgill-W1 cell line assay in a round-robin study focusing on 6 test chemicals involving 6 laboratories from the industrial and academic sector. All participating laboratories were able to establish the assay according to preset quality criteria even though, apart from the lead laboratory, none had previously worked with the RTgill-W1 cell line. Concentration-response modeling, based on either nominal or geometric mean-derived measured concentrations, yielded effect concentrations (EC50) that spanned approximately 4 orders of magnitude over the chemical range, covering all fish acute toxicity categories. Coefficients of variation for intralaboratory and interlaboratory variability for the average of the 3 fluorescent cell viability measurements were 15.5% and 30.8%, respectively, which is comparable to other fish-derived, small-scale bioassays. This study therefore underlines the robustness of the RTgill-W1 cell line assay and its accurate performance when carried out by operators in different laboratory settings.' (1668 chars)

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## Kontakt

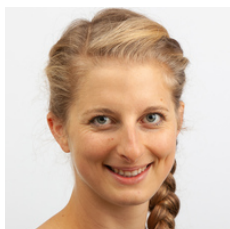


**Kristin Schirmer**

Gruppenleiterin und stellv. Abteilungsleiterin

Tel. +41 58 765 5266

[kristin.schirmer@eawag.ch](mailto:kristin.schirmer@eawag.ch)



**Melanie Fischer**

Technische Mitarbeiterin

Tel. +41 58 765 5233

[melanie.fischer@eawag.ch](mailto:melanie.fischer@eawag.ch)

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