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## On the origin of 'bloopergenes': unraveling the evolution of the balanced lethal system in *Triturus newts*

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# Stellingen

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## **On the origin of ‘bloopergenes’: unraveling the evolution of the balanced lethal system in *Triturus newts***

1. The supergenes involved in a balanced lethal system had better be called ‘bloopergenes’ instead, given the evolutionary cost. - This thesis, adjusted from Chapter 6
2. Enabling more target capture studies of salamandrids is especially important considering the drastic population declines of amphibians worldwide. - This thesis, adjusted from Chapter 4
3. One can identify Presence Absence Variation in target capture data by considering the genomic position as a variable for signal displacement, rather than time, in cross-correlation analyses. – This thesis, adjusted from Chapter 5
4. The near-identical gene content of chromosomes 1A and 1B across the genus *Triturus* suggests that the balanced lethal system originated before *Triturus* radiated and remained conserved ever since. – This thesis, adjusted from Chapter 6
5. The most intriguing aspect to study during the development of *Triturus* embryos is no longer the moment of death, but rather the events leading up to it (in line with Mauro Rusconi’s perspective from *Amours des Salamandres Aquatiques*, 1821).
6. Evolution is thoughtless, lazy and imperfect, as it has no predetermined end goal (inspired by Richard Dawkin’s *The Blind Watchmaker*, 1986).
7. Biodiversity loss cannot be halted without also preventing the loss of genetic diversity (in line with Frankham, Ballou, and Briscoe’s *A Primer of Conservation Genetics*, 2004).
8. Target capture studies will remain essential – even once whole genome sequencing has become perfectly affordable (based on Andermann *et al.*, 2020).
9. A multidisciplinary approach helps scientists tackle challenging research questions, datasets, and study organisms.
10. The genetics behind balanced lethal systems can be explained as a natural form of ‘Russian roulette’. – Inspired by the *Squid Game* Season 2 ‘*Bread & Lottery*’ episode.
11. The academic system should recognize impactful outreach activities as meaningful contributions comparable to publications, rather than dismissing them as frivolous side activities.
12. Nature is never strange – we simply do not fully understand it yet. – Inspired by the quote, “There are no strange creatures. Only blinkered people” by fictional zoologist ‘Newt Scamander’ from *Fantastic Beasts and Where to Find Them*.