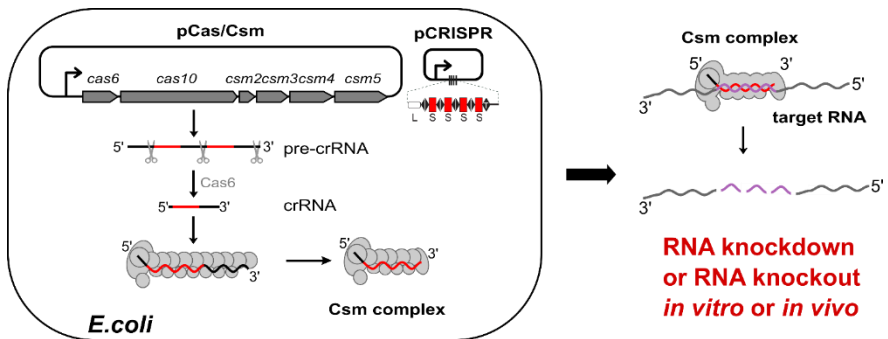


Programmable RNA shredding by the type III-A CRISPR-Cas system of *Streptococcus thermophilus*

Brief description of a technology

A type III-A CRISPR-Cas Csm complex, comprising crRNA, Csm3, Csm4 or any other subunits, usage for the cleavage of target RNA containing a nucleotide sequence complementary to the crRNA bound in the complex. Provides methods for site-specific cleavage of target RNA molecules and RNA knock-down or RNA knock-out, *in vitro* or *in vivo*.



Purpose

Programmable RNA cleavage *in vitro* and RNA knock-down or RNA knock-out *in vivo*.

Fields of application

Functional gene analysis, RNA interference, transcriptomic analysis.

Technology readiness

Technology is validated in lab.

Intellectual property

Patents: EP3189140 (B1), US10385336 (B2).

Applicant: Vilnius University (Lithuania).

Inventors

- Virginijus SIKSNYS
- Migle KAZLAUSKIENE
- Gintautas TAMULAITIS

Relevant publications

Tamulaitis et al. (2014) *Molecular Cell*, doi: 10.1016/j.molcel.2014.09.027

Kazlauskienė et al. (2016) *Molecular Cell*, doi: 10.1016/j.molcel.2016.03.024

Tamulaitis et al. (2017) *Trends in Microbiology*, doi: 10.1016/j.tim.2016.09.012

Mogila et al. (2019) *Cell Reports*, doi: 10.1016/j.celrep.2019.02.029

Contact

[Dr. Ramūnas Grigonis](#)

Vilnius University Innovation Office

E-mail: ramunas.grigonis@cr.vu.lt

Phone: +370 5 268 7006