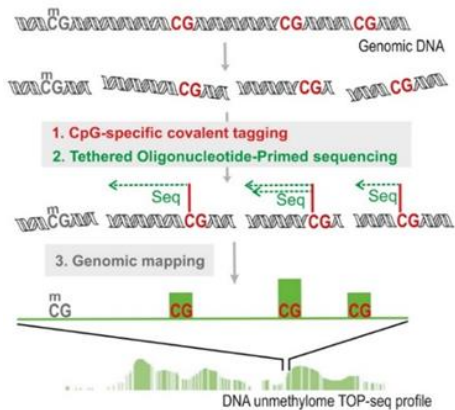


# TOP-seq: technology for high-resolution economical analysis of DNA epigenome

## BRIEF DESCRIPTION OF A TECHNOLOGY

Dynamic patterns of DNA modification are part of epigenetic regulation in vertebrates, including humans, which contributes to normal phenotypic variation and disease risk and thus can be used as diagnostic and prognostic disease markers. We offer a robust and economical nucleotide-resolution technique (TOP-seq) for high-resolution mapping of epigenetic modifications in the genome using covalent tagging of the modification target sites.



## PURPOSE

Determination of genomic DNA modification profiles for research and diagnostics.

## FIELDS OF APPLICATION

Epigenomic profiling, biomarkers, genomics, diagnostics, cell-free DNA.

## TECHNOLOGY READINESS LEVEL

Technology validated in lab.

## INTELLECTUAL PROPERTY

Patents: EP2776575 (B1), US9347093 (B2), US9988673 (B2).  
Applicant: Vilnius University.

## INVENTORS

- Saulius KLIMAŠAUSKAS
- Edita KRIUKIENĖ
- Zdislav STAŠEVSKIJ

## PUBLICATIONS

Kriukienė et al. (2013) Nature Commun., 4: 2190.  
Staševskij et al. (2017) Mol. Cell, 2017, 65: 554.  
Daniūnaitė et al. (2019) Curr. Opin. Biotechnol., 2019, 55: 23.



Vilnius  
University

## CONTACTS

- Prof. Dr. Saulius Klimašauskas  
Institute of Biotechnology, Life Sciences Center, Vilnius University  
E-mail: saulius.klimasauskas@bti.vu.lt  
Phone: +370 5 223 4350
- Dr. Ramūnas Grigonis  
Innovation Office, Department for Research and Innovation, Vilnius University  
E-mail: ramunas.grigonis@cr.vu.lt  
Phone: +370 5 268 7006