

# Resource Summary Report

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## PESTO

RRID:SCR\_016891

Type: Tool

### Proper Citation

PESTO (RRID:SCR\_016891)

### Resource Information

**URL:** <https://github.com/ICB-DCM/PESTO>

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**Description:** Software customizable toolbox for parameter estimation in MathWorks MATLAB. Offers scalable algorithms for optimization, uncertainty and identifiability analysis which do not depend on any problem-specific assumptions.

**Abbreviations:** PESTO

**Synonyms:** Parameter ESTimation TOolbox, PESTO

**Resource Type:** data processing software, software toolkit, data analysis software, software resource, software application

**Defining Citation:** [PMID:29069312](#)

**Keywords:** parameter, estimation, MATLAB, algorithm, optimization, uncertainty, identifiability, analysis

**Funding:** European Union's Horizon ;  
German Federal Ministry of Education and Research ;  
German Research Foundation via the Graduate School of Quantitative Biosciences Munich

**Availability:** Free, Available for download, Freely available

**Resource Name:** PESTO

**Resource ID:** SCR\_016891

**Alternate URLs:** <https://zenodo.org/record/579890#.XDZvSlxKiM9>

**License:** BSD license

**Record Creation Time:** 20220129T080332+0000

**Record Last Update:** 20260731T043013+0000

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## Ratings and Alerts

No rating or validation information has been found for PESTO.

No alerts have been found for PESTO.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 10 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [PRECISE-TBI](#) .

Schulz M, et al. (2024) Mathematical multi-compartment modeling of chronic lymphocytic leukemia cell kinetics under ibrutinib. *iScience*, 27(12), 111242.

Assadizadeh M, et al. (2023) Oligomer formation of SARS-CoV-2 ORF8 through 73YIDI76 motifs regulates immune response and non-infusion antiviral interactions. *Frontiers in molecular biosciences*, 10, 1270511.

Eriksson O, et al. (2022) Combining hypothesis- and data-driven neuroscience modeling in FAIR workflows. *eLife*, 11.

Raimúndez E, et al. (2021) COVID-19 outbreak in Wuhan demonstrates the limitations of publicly available case numbers for epidemiological modeling. *Epidemics*, 34, 100439.

Raimúndez E, et al. (2020) Model-based analysis of response and resistance factors of cetuximab treatment in gastric cancer cell lines. *PLoS computational biology*, 16(3), e1007147.

Alabert C, et al. (2020) Domain Model Explains Propagation Dynamics and Stability of Histone H3K27 and H3K36 Methylation Landscapes. *Cell reports*, 30(4), 1223.

Schuh L, et al. (2020) H4K20 Methylation Is Differently Regulated by Dilution and Demethylation in Proliferating and Cell-Cycle-Arrested *Xenopus* Embryos. *Cell systems*, 11(6), 653.

Bast L, et al. (2018) Increasing Neural Stem Cell Division Asymmetry and Quiescence Are Predicted to Contribute to the Age-Related Decline in Neurogenesis. *Cell reports*, 25(12), 3231.

Fröhlich F, et al. (2018) Efficient Parameter Estimation Enables the Prediction of Drug Response Using a Mechanistic Pan-Cancer Pathway Model. *Cell systems*, 7(6), 567.

Hross S, et al. (2018) Mechanistic description of spatial processes using integrative modelling of noise-corrupted imaging data. *Journal of the Royal Society, Interface*, 15(149), 20180600.