

Resource Summary Report

Generated by SPARC SAWG on Sep 19, 2026

Polyester

RRID:SCR_003602

Type: Tool

Proper Citation

Polyester (RRID:SCR_003602)

Resource Information

URL: <https://github.com/alyssafraze/polyester>

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Description: An R package designed to simulate RNA sequencing experiments with differential transcript expression. Given a set of annotated transcripts, it will simulate the steps of an RNA-seq experiment (fragmentation, reverse-complementing, and sequencing) and produce files containing simulated RNA-seq reads. Simulated reads can be analyzed using a choice of downstream analysis tools. Polyester has a built-in wrapper function to simulate a case/control experiment with differential transcript expression and biological replicates. Users are able to set the levels of differential expression at transcripts of their choosing. This means they know which transcripts are differentially expressed in the simulated dataset, so accuracy of statistical methods for differential expression detection can be analyzed. Polyester offers several unique features: * Built-in functionality to simulate differential expression at the transcript level * Ability to explicitly set differential expression signal strength * Simulation of small datasets, since large RNA-seq datasets can require lots of time and computing resources to analyze * Generation of raw RNA-seq reads, as opposed to alignments or transcript-level abundance estimates * Transparency/open-source code

Resource Type: data analysis software, data processing software, simulation software, software application, software resource

Keywords: standalone software, unix/linux, mac os x, windows, r, rna-seq

Resource Name: Polyester

Resource ID: SCR_003602

Alternate IDs: OMICS_04272

Record Creation Time: 20220129T080219+0000

Record Last Update: 20260912T195600+0000

Ratings and Alerts

No rating or validation information has been found for Polyester.

No alerts have been found for Polyester.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 491 mentions in open access literature.

Listed below are recent publications. The full list is available at [SPARC SAWG](#) .

Boduli? K, et al. (2026) Comprehensive assessment of transcriptome assembly quality using CATS. Nature communications, 17(1).

Ma H, et al. (2026) Cold-adapted carboxylesterases from Alcanivoracaceae active with a wide range of synthetic polyesters. Applied microbiology and biotechnology, 110(1), 59.

Deng X, et al. (2025) A Wearable Triboelectric Nanogenerator Based on Polyester-Paper Cloth for Mechanical Energy Harvesting and Running Motion Sensing. ChemistryOpen, 14(6), e202400373.

Tepa-Yotto GT, et al. (2025) Plant Signaling Mediates Interactions Between Fall and Southern Armyworms (Lepidoptera: Noctuidae) and Their Shared Parasitoid Cotesia icipe (Hymenoptera: Braconidae). Insects, 16(6).

Fischer NM, et al. (2025) Two distinct host-specialized fungal species cause white-nose disease in bats. Nature, 642(8069), 1034.

Wu H, et al. (2025) Measurements of face mask's capability to block ionizing radiation. Scientific reports, 15(1), 6516.

Song K, et al. (2025) DOLPHIN advances single-cell transcriptomics beyond gene level by leveraging exon and junction reads. Nature communications, 16(1), 6202.

Lee JH, et al. (2025) Redefining the limits of actuating fibers via mesophase control: From contraction to elongation. Science advances, 11(3), eadt7613.

Singh NP, et al. (2025) Tree-based differential testing using inferential uncertainty for RNA-seq. Genome research, 35(10), 2326.

Wu D, et al. (2025) Life cycle assessment of a luxury fashion brand's HPP event booth in the context of circular economy. Scientific reports, 15(1), 5153.

Fan S, et al. (2025) Strain-Sensitive Thermo-chromic Smart Electronic Skin for Joint and Spine Healthcare Applications. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 12(37), e07605.

Huang P, et al. (2025) Laser-Ablative Structuring of Elastic Bandages-An Experimental Study. *Nanomaterials* (Basel, Switzerland), 15(9).

Greener JG, et al. (2025) Reversible molecular simulation for training classical and machine-learning force fields. *Proceedings of the National Academy of Sciences of the United States of America*, 122(22), e2426058122.

Kuroda M, et al. (2025) Settling and Along-Isopycnal Subduction of Small Microplastics Into Subsurface Layers of the Western North Pacific Ocean. *Environmental science & technology*, 59(38), 20716.

Yu A, et al. (2025) Advanced design of 3D knitted padding for wearable cushioning in knee protector. *Scientific reports*, 15(1), 11091.

Ahmed Abdelkarem Mohamed A, et al. (2025) Assessing the Safety and Aesthetic Benefits of Reduced Port Bikini-Line Sleeve Gastrectomy (RBSG): An Initial Report. *Obesity surgery*, 35(9), 3491.

Park J, et al. (2025) Bioinspired capillary force-driven super-adhesive filter. *Nature*, 643(8071), 388.

Sherman RA, et al. (2025) Expanding access to maggot containment dressings through redesign and innovation. *International wound journal*, 22(1), e70100.

Sajankila N, et al. (2025) Staged thoracoscopic internal traction approach for early repair of long-gap esophageal atresia (LGEA) with distal tracheoesophageal fistula (TEF). *Pediatric surgery international*, 41(1), 70.

Guo W, et al. (2025) A barley pan-transcriptome reveals layers of genotype-dependent transcriptional complexity. *Nature genetics*, 57(2), 441.