Resource Summary Report

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Polyester

RRID:SCR_003602
Type: Tool

Proper Citation

Polyester (RRID:SCR_003602)

Resource Information

URL: https://github.com/alyssafrazee/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: software application, data analysis software, simulation software, software resource, data processing software

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

Funding:

Resource Name: Polyester

Resource ID: SCR_003602

Alternate IDs: OMICS_04272

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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 443 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

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

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.

Soureh AS, et al. (2025) Investigating the effect of fiber arrangement on tensile properties of two-dimensional hybrid braided composite rods. Scientific reports, 15(1), 3116.

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

Tuncer M, et al. (2025) Experimental Investigation of Durability Properties of Polymer Coated Pumice Aggregate Lightweight Concretes. Polymers, 17(2).

Margeson MJ, et al. (2025) Turning Trash to Treasure: The Influence of Carbon Waste Source on the Photothermal Behaviour of Plasmonic Titanium Carbide Interfaces. Chemphyschem : a European journal of chemical physics and physical chemistry, 26(2), e202400806.

Pahari P, et al. (2025) Release of Bisphenol A and Other Volatile Chemicals from New

Epoxy Drinking Water Pipe Liners: The Role of Manufacturing Conditions. Environmental science & technology, 59(1), 767.

Habib A, et al. (2024) Development of sustainable dual core-spun yarns using several filaments and recycled cotton sourced from pre-consumer fabric waste. Heliyon, 10(9), e29392.

Obitková D, et al. (2024) Virus removal by high-efficiency air (HEPA) filters and filtration capacity enhancement by nanotextiles: a pilot study. Folia microbiologica, 69(2), 459.

Thammasanya T, et al. (2024) A new approach to classifying polymer type of microplastics based on Faster-RCNN-FPN and spectroscopic imagery under ultraviolet light. Scientific reports, 14(1), 3529.

Easton KL, et al. (2024) Replacement of tibialis cranialis tendon with polyester, silicone-coated artificial tendon preserves biomechanical function in rabbits compared to tendon excision only. Journal of orthopaedic surgery and research, 19(1), 108.

Maaz A, et al. (2024) A Cell-Based Nasal Model for Screening the Deposition, Biocompatibility, and Transport of Aerosolized PLGA Nanoparticles. Molecular pharmaceutics, 21(3), 1108.

Saslawsky K, et al. (2024) FlaxPack: Tailored Natural Fiber Reinforced (NFRP) Compliant Folding Corrugation for Reversibly Deployable Bending-Active Curved Structures. Polymers, 16(4).

Simoneau CR, et al. (2024) NF-?B inhibitor alpha controls SARS-CoV-2 infection in ACE2-overexpressing human airway organoids. Scientific reports, 14(1), 15351.

Zaini MSI, et al. (2024) Experimental study on the use of polyoxymethylene plastic waste as a granular column to improve the strength of soft clay soil. Scientific reports, 14(1), 22558.

García-Guzmán C, et al. (2024) Electrochemical Strips Modified with Zeolites Embedding Silver Clusters for Versatile (Bio)Systems. Analytical chemistry, 96(45), 17915.

Calle A, et al. (2024) In vitro co-culture system for investigating Armillaria root rot in Prunus spp. using a fiber-supported liquid approach. PloS one, 19(9), e0310314.

Ueda MT, et al. (2024) Functional and dynamic profiling of transcript isoforms reveals essential roles of alternative splicing in interferon response. Cell genomics, 4(10), 100654.

Simon NM, et al. (2024) Stem cell transcriptional profiles from mouse subspecies reveal cis-regulatory evolution at translation genes. Heredity, 133(5), 308.

Zhang S, et al. (2024) Internal water circulation mediated synergistic co-hydrolysis of PET/cotton textile blends in gamma-valerolactone. Nature communications, 15(1), 4498.