

# Resource Summary Report

Generated by [Kravitz](#) on Sep 10, 2026

## PESTICA fMRI Physio Detection/Correction

RRID:SCR\_002513

Type: Tool

### Proper Citation

PESTICA fMRI Physio Detection/Correction (RRID:SCR\_002513)

### Resource Information

**URL:** <http://www.nitrc.org/projects/pestica/>

**Proper Citation:** PESTICA fMRI Physio Detection/Correction (RRID:SCR\_002513)

**Description:** Software tool to detect physiologic signals from the data itself as well as an adaptive physiologic noise removal tool (Impulse Response Function or IRF-RETROICOR) that zooms in on noise with only 6 regressors, getting all the noise that 5th order RETROICOR gets. These tools will allow you to correct your data for physiologic noise with what you currently have. These signals are equivalent to a parallel monitored pulse signal and a respiratory chest-bellows signal. Do you have 3D+time EPI data (BOLD or perfusion) but no usable physio signals for pulse and respiration? Are you concerned about the effect of physio noise on your data but don't know what to do but regress data-derived signals that mix unknown functional signal with possible physio noise signal? Are you concerned about the number of regressors you're incorporating once you add 5th order RETROICOR (20 more regressors!)? This is for you.

**Abbreviations:** PESTICA

**Synonyms:** Physiologic EStimation by Temporal ICA

**Resource Type:** software application, software resource

**Keywords:** algorithm, analyze, console (text based), hardware, independent component analysis, linux, macos, matlab, magnetic resonance, multivariate analysis, physiological recording, posix/unix-like, sh/bash, statistical operation, unix shell, workflow, fmri, detection, correction

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

**Resource Name:** PESTICA fMRI Physio Detection/Correction

**Resource ID:** SCR\_002513

**Alternate IDs:** nlx\_155912

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**Record Creation Time:** 20220129T080213+0000

**Record Last Update:** 20260905T133227+0000

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## Ratings and Alerts

No rating or validation information has been found for PESTICA fMRI Physio Detection/Correction.

No alerts have been found for PESTICA fMRI Physio Detection/Correction.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 6 mentions in open access literature.

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

Zimmermann J, et al. (2024) Unresponsiveness induced by sevoflurane and propofol is associated with reduced basal forebrain cholinergic nuclei functional connectivity in humans, a pilot exploratory study. *Neuroimage. Reports*, 4(4), 100224.

Schinz D, et al. (2023) Indirect evidence for altered dopaminergic neurotransmission in very premature-born adults. *Human brain mapping*, 44(15), 5125.

Jung YH, et al. (2018) Altered Amygdala Resting-State Functional Connectivity and Hemispheric Asymmetry in Patients With Social Anxiety Disorder. *Frontiers in psychiatry*, 9, 164.

Cha J, et al. (2015) Assessment of Functional Characteristics of Amnestic Mild Cognitive Impairment and Alzheimer's Disease Using Various Methods of Resting-State FMRI Analysis. *BioMed research international*, 2015, 907464.

Brooks JC, et al. (2013) Physiological noise in brainstem FMRI. *Frontiers in human neuroscience*, 7, 623.

Li YC, et al. (2011) Impact of visual repetition rate on intrinsic properties of low frequency fluctuations in the visual network. *PloS one*, 6(5), e18954.