Resource Summary Report

Generated by RRID on Apr 16, 2025

SimThyr

RRID:SCR_014351
Type: Tool

Proper Citation

SimThyr (RRID:SCR_014351)

Resource Information

URL: https://simthyr.sourceforge.io

Proper Citation: SimThyr (RRID:SCR_014351)

Description: Open source simulation software for thyroid homeostasis, based on published nonlinear model of pituitary thyroid feedback control. Simulates pituitary thyroid feedback control, which allows users to study relationship between structure and behaviour of thyroid homeostasis.

Resource Type: simulation software, software resource, software application

Defining Citation: PMID:23365787, DOI:10.1080/01969720490443354, DOI:10.1155/2012/351864, DOI:10.5281/zenodo.1303822

Keywords: thyroid, homeostasis, simulation, software, modelling, pituitary, model

Funding:

Availability: Free, Available for download, Freely available

Resource Name: SimThyr

Resource ID: SCR_014351

Alternate IDs: DOI:10.5281/zenodo.1303822

Alternate URLs: https://doi.org/10.5281/zenodo.1303822

License: BSD license

Record Creation Time: 20220129T080320+0000

Record Last Update: 20250416T063703+0000

Ratings and Alerts

No rating or validation information has been found for SimThyr.

No alerts have been found for SimThyr.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 10 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID.

Dietrich JW, et al. (2022) SPINA Carb: a simple mathematical model supporting fast in-vivo estimation of insulin sensitivity and beta cell function. Scientific reports, 12(1), 17659.

Ghosh D, et al. (2022) Clustering Based Parameter Estimation of Thyroid Hormone Pathway. IEEE/ACM transactions on computational biology and bioinformatics, 19(1), 343.

Hoermann R, et al. (2018) The role of functional thyroid capacity in pituitary thyroid feedback regulation. European journal of clinical investigation, 48(10), e13003.

Hoermann R, et al. (2017) Advances in applied homeostatic modelling of the relationship between thyrotropin and free thyroxine. PloS one, 12(11), e0187232.

Chatzitomaris A, et al. (2017) Thyroid Allostasis-Adaptive Responses of Thyrotropic Feedback Control to Conditions of Strain, Stress, and Developmental Programming. Frontiers in endocrinology, 8, 163.

Dietrich JW, et al. (2016) Calculated Parameters of Thyroid Homeostasis: Emerging Tools for Differential Diagnosis and Clinical Research. Frontiers in endocrinology, 7, 57.

Hoermann R, et al. (2015) Integration of Peripheral and Glandular Regulation of Triiodothyronine Production by Thyrotropin in Untreated and Thyroxine-Treated Subjects. Hormone and metabolic research = Hormon- und Stoffwechselforschung = Hormones et metabolisme, 47(9), 674.

Midgley JE, et al. (2013) Physiological states and functional relation between thyrotropin and free thyroxine in thyroid health and disease: in vivo and in silico data suggest a hierarchical

model. Journal of clinical pathology, 66(4), 335.

Hoermann R, et al. (2013) Is pituitary TSH an adequate measure of thyroid hormone-controlled homoeostasis during thyroxine treatment? European journal of endocrinology, 168(2), 271.

Dietrich JW, et al. (2012) TSH and Thyrotropic Agonists: Key Actors in Thyroid Homeostasis. Journal of thyroid research, 2012, 351864.