



# Carolin Thomas

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German with a Swiss C permit

Languages: German – Native; English – C2; French – A2



## Innovation & Achievements

- Development of an anti-aging drug: Screening to patent filing and IP licensing negotiations within 5 years
- Nominated among 20 most innovative inventions of ETH Zurich 2023

## Scientific Skills

- Development of 10+ state-of-the-art methodologies - *in vitro*, cellular models, *C. elegans*, and mice
- Ethical and regulatory insights into R&D and clinical research (LTK1 & 2, GCP)

## Interpersonal Skills

- Scientific project lead in external industry collaboration (2 years)
- Dynamic team colleague in interdisciplinary R&D projects (6 years)

## Work Experience

04/2024 – Today	<b>Postdoctoral Fellow, USZ, Zurich</b> Department of Gastroenterology and Hepatology Innosuisse-based industry collaborations to target inflammatory bowel disease and cancer	Immunology and Inflammation
01/2022 – 11/2023	<b>Postdoctoral Fellow, ETH Zurich, Zurich</b> collaborating with <b>Reckitt Benckiser</b> Identified and characterized 5 health-promoting molecules scheduled for patent filings; study design, data analysis, and interpretation of a screening approach	Drug Discovery in Immunity and Health
11/2017 – 12/2021	<b>Doctoral Scientist, ETH Zurich, Zurich</b> Pioneered the discovery and preclinical development of an innovative drug candidate targeting 3+ cellular mechanisms in cardiovascular and metabolic health, succeeding in a cross-functional IP co-inventorship and an award nomination	Drug Development in Metabolism and Aging
03/2017 – 08/2017	<b>Internship, Roche Pharma AG, Basel</b> Identified exploratory biomarkers to track the efficacy of a novel medicine in clinical trials; resulting in a scientific publication	Exploratory Biomarkers in Rare Diseases
Between 2014-2016	<b>Student Internships, SDU, Odense (DK) and DKFZ, Heidelberg (DE)</b> Investigated neuronal signaling pathways in health and neurodegeneration	Cell Biology and Clinical Neurobiology

## Education

11/2017 – 12/2021	<b>Doctor of Science ETH Zurich (Ph.D), ETH Zurich</b> <i>'Small Molecule-Mediated Promotion of Healthy Lifespan: Phenotypes &amp; Mechanisms'</i>	Health Sciences and Technologies
10/2014 – 01/2017	<b>Master of Science, TU Kaiserslautern (DE) / SDU Odense (DK)</b> <i>'Dimerization of the Amyloid Precursor Protein and its Impact on Cellular Transport'</i>	Molecular Cell- and Neurobiology
10/2011 – 10/2014	<b>Bachelor of Science, TU Kaiserslautern (DE)</b> <i>'Analysis of Hydrogen Peroxide Dynamics with High Spatio-Temporal Resolution'</i>	Biosciences

## Patent and Publications

**European Patent** Co-inventor 'New compounds and their use as anti-aging agent or as exercise enhancer' – WO2023143988A1

Thomas et al., Nat. Commun. (2022)  
*A novel naturally occurring polyacetylene isolated from carrots promotes health and delays signatures of aging.*

Grigolon, Araldi, Erni, Wu, Thomas et al., Nat. Commun. (2021)  
*Grainyhead 1 acts as drug-inducible conserved transcriptional regulator linked to insulin signaling and lifespan.*

Eggert, Gonzalez, Thomas et al., Cell. Mol. Life Sci. (2018)  
*Dimerization leads to changes in Amyloid Precursor Protein trafficking mediated by LRP1 and SorLA.*

Hellbach, (...), Thomas et al., PLoS One (2018)  
*Impaired myogenic development, differentiation, and function in hESC-derived SMA myoblasts & -tubes.*

Herr, Strecker, Storck, Thomas et al., Front. Mol. Neurosci. (2017)  
*LRP1 modulates APP intraneuronal transport and processing in its monomeric and dimeric state.*

### Scientific Reviews

Thomas, Wurzer, Malle, Ristow, Madreiter-Sokolowski, Front. Aging (2022)

Madreiter-Sokolowski, Thomas, Ristow., Redox Biol. (2020)

Eggert, Thomas, Kins, Hermey, Mol. Neurobiol. (2018)