

Laura Covill
Curriculum Vitae

Personal Details

Nationality: British
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Email: laura.elaine.covill@ki.se
Date of birth: 11/08/1995

Education

2019 – present PhD in Immunogenetics, Karolinska Institutet (supervisor: Prof Yenan Bryceson)
Contact details: yenan.bryceson@ki.se; Center for Hematology and Regenerative Medicine, Karolinska Institutet, NEO 7th floor
Main project developing workflow for prioritizing non-coding variants which are functional in monogenic immunodeficiencies; secondary projects in genetics of acute Covid-19 in young individuals.

2017 – 2018 MSc by Research, Biology, University of York (supervisor: Dr Chris Elliott, co-supervisor: Dr Sean Sweeney)
Project included expressing normal and mutated human copies of protein Rab10 in *Drosophila*, in order to test the hypothesis that Rab10 mediates the degenerative effects of mutations in LRRK2.

2014 – 2017 BSc (Hons) Biochemistry, King's College London (Upper 2nd class)
Dissertation on genetics of sleep phenotypes in human and mouse imprinting disease (supervisor: Prof Alison Snape)

Research Experience

April 2022 visiting PhD student, Casanova lab, Rockefeller University (supervisor: Dr Qian Zhang)

2018 – 2019 invitation to research, Schiöth lab, Uppsala University. Supervisor: Dr Michael Williams
Skills: Experience working with SPSS and Stata for statistical analyses including mediation analysis; transcriptome analysis, S2 cell culturing, fly behavioural assays, lightsheet and confocal microscopy; student supervision, report editing.

2013 – 2014 research assistant, Newbury lab, Wellcome Trust Centre for Human Genetics
Skills: Experience working with R, PyMOL, PLINK, Python, JalView, primer design and optimisation, exome sequencing and analysis, PCR, gel electrophoresis, qPCR, qubit assays, nanodrop assays, RE digests, writing and editing papers, abstracts and reviews, creating posters, and more.

June – August 2012 Nuffield Bursary completed at the McGregor laboratory at Oxford Brookes University. My project involved analyzing the reference transcriptome of the spider *Parasteatoda tepidariorum* for irregularities in the spider's Hox genes, and downstream analyses including sequence alignments and creating phylogenetic trees.

Other positions

- PhD student representative, Center for Hematology and Regenerative Medicine, KI
- Student and postdoc task force member, Center for Hematology and Regenerative Medicine, KI
- Elected member of the Royal Society of Biology 2020

Awards and prizes

- British Science Association Silver CREST award 2009
- British Science Association Gold CREST award 2012
- King's College London Desmond Tutu scholarship holder 2014

Publications

Efficacy of T cell exocytosis assays for the diagnosis of primary defects in cytotoxic lymphocyte exocytosis
Samuel C.C. Chiang, Bianca Tesi*, **Laura E. Covill***, Tessa M. Campbell, ... , Jan-Inge Henter, Marie Meeths, Yenan T. Bryceson, HLH Diagnostic Study Group
Manuscript

Mevalonate kinase deficiency: Hemophagocytic lymphohistiocytosis as a presenting feature of patients with mevalonic aciduria
Lamberto Torralba-Raga, Gonçalo Padeira, **Laura E. Covill**, Marta Conde, Ana Isabel Cordeiro, Marco Gattorno, Maura Faraci, Yenan T. Bryceson, Joao Farela Neves
Manuscript

Respiratory viral infections in otherwise healthy humans with inherited IRF7 deficiency
Campbell TM, Liu Z, Zhang Q, Moncada-Velez M, **Covill LE**,..., Cobat A, Casanova JL, Meyts I, Bryceson YT
J. Exp. Med., 2022 Jun

X-linked recessive TLR7 deficiency in ~1% of men under 60 years old with life-threatening COVID-19
Asano T, Boisson B, Onodi F, Matuozzo D,..., **Covill LE**,..., Soumelis V, Cobat A, Zhang Q, Casanova JL
Sci Immunol., 2021 Aug

Hobit identifies tissue-resident memory T cell precursors that are regulated by Eomes
Parga-Vidal L, Behr FM, Kragten NAM, Nota B, Wesselink TH, Kavazović I, **Covill LE**, Schuller MBP, Bryceson YT, Wensveen FM, van Lier RAW, van Dam TJP, Stark R, van Gisbergen KPJM
Sci Immunol., 2021 Aug

Rodent and fly models in behavioral neuroscience: an evaluation of methodological advances, comparative research, and future perspectives
Moulin TC, **Covill LE**, Itskov P, Williams MJ, Schiöth HB
Neurosci Biobehav Rev., 2021 Jan

In vivo visual screen for dopaminergic *Rab* ↔ *LRRK2-G2019S* interactions in *Drosophila* discriminates *Rab10* from *Rab3*
Petridi S, Middleton CA, Ugboode C, Fellgett A, **Covill LE**, Elliott CJH
G3 (Bethesda). 2020 Apr 22

The handedness-associated PCSK6 locus spans an intronic promoter regulating novel transcripts
Shore R, **Covill LE**, Pettigrew KA, Brandler WM, Diaz R, Xu Y, Tello JA, Talcott JB, Newbury DF, Stein J, Monaco AP, Paracchini S.
Hum Mol Genet. 2016 Feb 21

Multidisciplinary investigation links backward-speech trait and working memory through genetic mutation.
Prekovic S, Đurđević DF, Csifcsák G, Šveljo O, Stojković O, Janković M, Koprivšek K, **Covill LE**, Lučić M, Van den Broeck T, Helsen C, Ceroni F, Claessens F, Newbury DF.
Sci Rep. 2016 Feb 3

Genome-wide analysis identifies a role for common copy number variants in specific language impairment.
Simpson NH, Ceroni F, Reader RH, **Covill LE**, Knight JC; SLI Consortium, Hennessy ER, Bolton PF, Conti-Ramsden G, O'Hare A, Baird G, Fisher SE, Newbury DF.
Eur J Hum Genet. 2015 Oct 23

Genome-Wide Studies of Specific Language Impairment.
Reader RH, **Covill LE**, Nudel R, Newbury DF.
Curr Behav Neurosci Rep. 2014