

Forslund, Sofia, PhD (A04)

Personal Data

Title	PhD
First name	Sofia Johanna Kirke Miranda
Name	Forslund
Current position	Junior Group Leader; permanent position from 08.2023
Current institution(s)/site(s), country	Experimental and Clinical Research Unit, Charité – Universitätsmedizin Berlin & Max Delbrück Center for Molecular Medicine, Robert-Rössle-Str. 10, 13125 Berlin, Germany
Identifiers/ORCID	ORCID-ID: 0000-0003-4285-6993

Qualifications and Career

Stages	Periods and Details
Degree programme: Bioinformatics	2006 – 2011, Stockholm University, Stockholm, Sweden
Bioinformatics	2000 – 2007, MSc, Uppsala University, Sweden
Molecular Biotechnology	2000 – 2006, MSc, Uppsala University, Sweden
Doctorate: PhD	24.10.2011: Supervisor: Erik Sonnhammer, <i>“The relationship between orthology, protein domain architecture, and function”</i> , Stockholm University, Sweden
Stages of academic / professional career	
Since 2018	Junior Group Leader, Experimental and Clinical Research Unit, Charité – Universitätsmedizin Berlin & Max Delbrück Center for Molecular Medicine, Berlin, Germany
2014 – 2018	Research Scientist, Structural and Computational Biology Unit, European Molecular Biology Laboratory, Heidelberg, Germany
2012 – 2014	Postdoctoral research project, Structural and Computational Biology Unit, European Molecular Biology Laboratory, Heidelberg, Germany

Engagement in the Research System

Scientific self-administration and scientific interactions

- Strategy Board of the MDC (since 2022)
- Steering Committee for SFB1470 “HFpEF” (since 2021)
- MDC HPC/IT Committee (since 2021)
- MDC Gender Equality Plan Working Group (since 2021)
- SFB1470 (HFpEF) Steering Committee (since 2020)
- MDC POF IV Governance Working Group (since 2020)
- MDC Career and Training Committee (CTC) (since 2019)
- ECRC Steering Committee as Junior PI representative (since 2019)
- MDC POF IV Strategic Planning Working Group (2019)

- MDC Anti-Harassment Task Force (2019)
- EMBL Gender Balance/Equality and Diversity Committee (2016 – 2017)

Consortia and networks:

- EU (FP7, H2020, Horizon): MetaHIT, MetaCardis, IMMEDIATE
- DFG: SFB1365, SFB1449, SFB1470, KFO338
- BMBF: WHEAT-A-BAIC

Teaching/mentoring:

- Teaching courses: Charité Molecular Medicine program & SFB graduate schools (2020 – 2021)
- Supervision of project students (visitors, masters and interns), teaching PhD courses: EMBL (2013 – 2018)
- Teaching and curriculum design: MSc Programme in Bioinformatics, Stockholm University (2009 – 2011)

Scientific Results

Category A, * contributed equally, # open access

1. **Forslund SK**. Fasting intervention and its clinical effects on the human host and microbiome. **J Intern Med** 2023; 293(2):166-183. doi: 10.1111/joim.13574.
2. Fromentin S, **Forslund SK**, Chechi K, Aron-Wisnewsky J, Chakaroun R, Nielsen T, Tremaroli V, Ji B, Prifti E, Myridakis A, Chilloux J, Andrikopoulos P, Fan Y, Olanipekun MT, Alves R, Adiouch S, Bar N, Talmor-Barkan Y, Belda E, Caesar R, Coelho LP, Falony G, Fellahi S, Galan P, Galleron N, Helft G, Hoyles L, Isnard R, Le Chatelier E, Julienne H, Olsson L, Pedersen HK, Pons N, Quinquis B, Rouault C, Roume H, Salem JE, Schmidt TSB, Vieira-Silva S, Li P, Zimmermann-Kogadeeva M, Lewinter C, Søndertoft NB, Hansen TH, Gauguier D, Gøtze JP, Køber L, Kornowski R, Vestergaard H, Hansen T, Zucker JD, Hercberg S, Letunic I, Bäckhed F, Oppert JM, Nielsen J, Raes J, Bork P, Stumvoll M, Segal E, Clément K, Dumas ME, Ehrlich SD, Pedersen O. Microbiome and metabolome features of the cardiometabolic disease spectrum. **Nat Med** 2022; 28(2):303-314. doi: 10.1038/s41591-022-01688-4. #
3. **Forslund SK**, Chakaroun R, Zimmermann-Kogadeeva M, Markó L, Aron-Wisnewsky J, Nielsen T, Moitinho-Silva L, Schmidt TSB, Falony G, Vieira-Silva S, Adiouch S, Alves RJ, Assmann K, Bastard JP, Birkner T, Caesar R, Chilloux J, Coelho LP, Fezeu L, Galleron N, Helft G, Isnard R, Ji B, Kuhn M, Le Chatelier E, Myridakis A, Olsson L, Pons N, Prifti E, Quinquis B, Roume H, Salem JE, Sokolovska N, Tremaroli V, Valles-Colomer M, Lewinter C, Søndertoft NB, Pedersen HK, Hansen TH; MetaCardis Consortium*, Gøtze JP, Køber L, Vestergaard H, Hansen T, Zucker JD, Hercberg S, Oppert JM, Letunic I, Nielsen J, Bäckhed F, Ehrlich SD, Dumas ME, Raes J, Pedersen O, Clément K, Stumvoll M, Bork P. Combinatorial, additive and dose-dependent drug-microbiome associations. **Nature** 2021; 600(7889):500-505. doi: 10.1038/s41586-021-04177-9.
4. Maifeld A, Bartolomeaus H, Löber U, Avery EG, Steckhan N, Markó L, Wilck N, Hamad I, Šušnjar U, Mähler A, Hohmann C, Chen CY, Cramer H, Dobos G, Lesker TR, Strowig T,

- Dechend R, Bzdok D, Kleinewietfeld M, Michalsen A, Müller DN, **Forslund SK**. Fasting alters the gut microbiome reducing blood pressure and body weight in metabolic syndrome patients. **Nat Commun** 2021; 30:12(1):1970. doi: 10.1038/s41467-021-22097-0. #
5. Bartolomaeus TUP, Birkner T, Bartolomaeus H, Löber U, Avery EG, Mähler A, Weber D, Kochlik B, Balogh A, Wilck N, Boschmann M, Müller DN, Markó L, **Forslund SK**. Quantifying technical confounders in microbiome studies. **Cardiovasc Res** 2021; 22:117(3):863-875. doi: 10.1093/cvr/cvaa128.
 6. Bartolomaeus H, Avery EG, Bartolomaeus TUP, Kozhakhmetov S, Zhumadilov Z, Müller DN, Wilck N, Kushugulova A, **Forslund SK**. Blood pressure changes correlate with short-chain fatty acid production potential shifts under a synbiotic intervention. **Cardiovasc Res** 2020; 116(7):1252-1253. doi: 10.1093/cvr/cvaa083.
 7. Vieira-Silva S, Falony G, Belda E, Nielsen T, Aron-Wisniewsky J, Chakaroun R, **Forslund SK**, Assmann K, Valles-Colomer M, Nguyen TTD, Proost S, Prifti E, Tremaroli V, Pons N, Le Chatelier E, Andreelli F, Bastard JP, Coelho LP, Galleron N, Hansen TH, Hulot JS, Lewinter C, Pedersen HK, Quinquis B, Rouault C, Roume H, Salem JE, Søndergaard NB, Touch S; MetaCardis Consortium, Dumas ME, Ehrlich SD, Galan P, Gøtzte JP, Hansen T, Holst JJ, Køber L, Letunic I, Nielsen J, Oppert JM, Stumvoll M, Vestergaard H, Zucker JD, Bork P, Pedersen O, Bäckhed F, Clément K, Raes J. Statin therapy is associated with lower prevalence of gut microbiota dysbiosis. **Nature** 2020; 581(7808):310-315. doi: 10.1038/s41586-020-2269-x.
 8. Duscha A, Gisevius B, Hirschberg S, Yissachar N, Stangl GI, Eilers E, Bader V, Haase S, Kaisler J, David C, Schneider R, Troisi R, Zent D, Hegelmaier T, Dokalis N, Gerstein S, Del Mare-Roumani S, Amidror S, Staszewski O, Poschmann G, Stühler K, Hirche F, Balogh A, Kempa S, Träger P, Zaiss MM, Holm JB, Massa MG, Nielsen HB, Faissner A, Lukas C, Gatermann SG, Scholz M, Przuntek H, Prinz M, **Forslund SK**, Winklhofer KF, Müller DN, Linker RA, Gold R, Haghikia A. Propionic Acid Shapes the Multiple Sclerosis Disease Course by an Immunomodulatory Mechanism. **Cell** 2020; 180(6):1067-1080.e16. doi: 10.1016/j.cell.2020.02.035. #
 9. Pedersen HK, **Forslund SK**, Gudmundsdottir V, Petersen AØ, Hildebrand F, Hyötyläinen T, Nielsen T, Hansen T, Bork P, Ehrlich SD, Brunak S, Oresic M, Pedersen O, Nielsen HB. A computational framework to integrate high-throughput '-omics' datasets for the identification of potential mechanistic links. **Nat Protoc** 2018; 13(12):2781-2800. doi: 10.1038/s41596-018-0064-z.
 10. Palleja A, Mikkelsen KH, **Forslund SK**, Kashani A, Allin KH, Nielsen T, Hansen TH, Liang S, Feng Q, Zhang C, Pyl PT, Coelho LP, Yang H, Wang J, Typas A, Nielsen MF, Nielsen HB, Bork P, Wang J, Vilsbøll T, Hansen T, Knop FK, Arumugam M, Pedersen O. Recovery of gut microbiota of healthy adults following antibiotic exposure. **Nat Microbiol** 2018; 3(11):1255-1265. doi: 10.1038/s41564-018-0257-9.

Category B

1. Armada-Moreira A, Cizauskas C, Fleury G, **Forslund SK**, Guthman EM, Hanafiah A, Hope JM, Jayasinghe I, McSweeney D, Young ID. STEM Pride: Perspectives from

transgender, nonbinary, and genderqueer scientists. **Cell** 2021 Jun 24;184(13):3352-3355. doi: 10.1016/j.cell.2021.05.043

Academic Distinctions

- Clarivate/Web of Science Highly Cited Researcher (2019 – 2022)
- DZHK PI (2021)
- Helmholtz ERC Recognition Award (2019)
- Heidelberg Molecular Medicine Partnership Unit (MMPU) Fellow (2013)
- Alexander von Humboldt Foundation Post-Doctoral Research Fellow (2012)