Katrin J. Svensson, Ph.D.

Stanford University, School of Medicine, Department of Pathology
Address: 300 Pasteur Dr, R238, Stanford, CA 94305
Phone: 617.650.4380 Email: katrinjs@stanford.edu
ORCID: 0000-0001-5376-5128
Website: *svenssonlabstanford.org*
Date prepared: 03/04/2024

ACADEMIC APPOINTMENTS

01/01/2018-	Assistant Professor Department of Pathology, Stanford University Affinity Group Leader and Member, Stanford Diabetes Research Center (SDRC) ChemH Faculty Fellow Member, Wu-Tsai Human Performance Alliance Member, Cardiovascular Institute Member, MCHRI Member, Stanford Bio-X Member, CBI, Biophysics, Cancer Biology, MSTP/Ph.D. Programs

EDUCATION AND TRAINING

2013-2017	Postdoctoral Fellow, Harvard Medical School, Advisor: Bruce M. Spiegelman Ph.D.
2012-2013	Postdoctoral Fellow, Lund University, Sweden, Advisor: Mattias Belting M.D/Ph.D.
2007-2012	Ph.D., Medical Science, Lund University, Sweden, Advisor: Mattias Belting M.D/Ph.D.
2002-2006	M.S., Molecular Biology, Lund University, Sweden

HONORS AND AWARDS

2021	Finalist for the Helmholtz Young Investigator in Diabetes (HeIDi) Award that recognizes outstanding achievements of two young international scientists - rising stars
2019	Jacob Churg Research Award for Junior Faculty, Stanford University
2018	Gabilan Fellow, Stanford University
2018	McCormick and Gabilan Award, Stanford University
2016	K99/R00 NIH Pathway to Independence Award (NIDDK)
2013	Swedish Research Council International Postdoctoral Fellowship
2013	Blanceflor Boncompagni Ludovisi, nee Bildt Postdoctoral Fellowship (declined)
2012	International Society of Extracellular Vesicles conference best poster award
2012	Fru Berta Kamprad Society for Cancer Research Award, Sweden
2011	The Royal Physiographic Society, Foundation for natural science, medicine, and technology Award, Lund, Sweden
2010	The Royal Physiographic Society, Foundation for natural science, medicine, and technology Award, Lund, Sweden
2010	Lund University Faculty of Medicine Award for graduate studies, Lund, Sweden

BIBLIOGRAPHY (In total 42 peer-reviewed publications)

NCBI Bibliography
† Corresponding author
* My contributions (non-corresponding author)

Peer-reviewed original articles

1. Wiggenhorn, A.L., Abuzaid, H.Z., Coassolo, L., Li. V.L., Tanzo, J.T., Wei, W., Lyu, X., **Svensson, K.J.,** Long, J.Z. A class of secreted mammalian peptides with potential to expand cell-cell communication. ***Nat Commun*** 14, 8125 (2023). https://doi.org/10.1038/s41467-023-43857-0. *Performed animal experiments and data analysis.

2. Liu, H., Yerevanian, A., Westerhoff, M., H. Hastings, M.H., Baldovino Guerra, J.R.B, Zhao, M., **Svensson, K.J.**, Cai, B., Soukas, A.A., Anthony Rosenzweig, A. Roles of Activin A and Gpnmb in metabolic dysfunction-associated steatotic liver disease (MASLD). ***Diabetes.*** 2023 Nov 7:db230357. doi: 10.2337/db23-0357. Epub ahead of print. PMID: 37934943. *Performed single-cell RNA seq experiments and data analysis.

3. Bielczyk-Maczynska, E., Sharma, D., Blencowe, M., Gustafsson, P.S., Gloudemans, M., Chong, P., Yang, X., Wabitsch, M., **Svensson, K.J**., Quertermous, T., Knowles, J.W, Li, J., CROP-Seq: a single-cell CRISPRi platform for characterizing candidate genes relevant to metabolic disorders in human adipocytes. ***Am J Physiol Cell Physiol.*** *2023 Jul 24. doi: 10.1152/ajpcell.00148.2023. PMID: 37486064.* *Performed analysis and manuscript edits.

4. Maller, J., Morgan, T., Morita, M., McCarthy, F., Jung, Y., **Svensson, K.J.**, Elias, J.E., Macaubas, C., Mellins, E. Extracellular Vesicles in Systemic Juvenile Idiopathic Arthritis. ***J Leukoc Biol.*** 2023 May 18 doi: 10.1093/jleuko/qiad059. PMID: 37201912. *Performed experiments and data analysis.

5. Wei, W. Riley, N.M, Lyu, X., Shen, X., Jing Guo, J., Zhao, M., Moya-Garzon, M.D., Basu, H. Tung, A., Li, V.L., Huang, W., **Svensson, K.J**., Snyder, M.P. Bertozzi, C.R., Long J.Z. Organism-wide secretome mapping of tissue crosstalk in exercise. ***Cell Metab.*** 2023 Apr 28:S1550-4131(23)00138-9. PMID: 37141889. *Performed experiments and data analysis.

6. Zhao, M. Wat, L.W., **Svensson, K.J**.† Protocol for *in vivo* measurements of tissue-specific glucose uptake in mouse tissues. ***STAR Protoc.*** 2023 Mar 17;4(2):102179. PMID: 36933224; PMCID: PMC10031528.

7. Coassolo L., Liu, T., Jung, Y., Taylor, N.P., Zhao, M., Charville, G., Yki-Jarvinen, H. Altman, R., **Svensson, K.J**.† Mapping transcriptional heterogeneity and metabolic networks in fatty livers at single-cell resolution. ***iScience*** 2022;26(1):105802. PMID: 36636354; PMCID: PMC9830221.

8. He, S., Zambelli V.O., Sinharoy, P., Brabenec, L., Bian, Y., Rwere, F., Hell, C.R., Stein Neto, B., Hung B., Yu X., Zhao, M., Luo, Z., Wu, C., Xu, L., **Svensson, K.J**., McAllister, S.L., Stary, M.C., Wagner, N.M., Zhang, Y., Gross, E.R. A human TRPV1 genetic variant within the channel gating domain regulates pain sensitivity in rodents. ***J Clin Invest.*** 2022 Dec 6:e163735. PMID: 36472910. *Performed experiments and data analysis.

9. Bielczyk-Maczynska, E., Zhao, M., Zushin H., P-J., Schnurr, T.M., Kim, H-J., Li, J., Nallagatla, P., Sangwung, P., Park, C., Cornn, C., Stahl, A., **Svensson, K.J**., Knowles, J.W. G protein-coupled receptor 151 regulates glucose metabolism and hepatic gluconeogenesis. ***Nature Commun.*** **13**, 7408 (2022). PMID: 36456565 PMCID: PMC9715671*Co-supervised the first author on the project.

10. Zhao M., Banhos Danneskiold-Samsøe, N., Ulicna, L., Nguyen, Q., Coassolo, L., Lee, D.E., White, J.P., Jiang, Z., Cuthbert, N., Paramasivam, S., Bielczyk-Maczynska, E., Van Rechem, C., **Svensson, K.J.**†

Phosphoproteomic mapping reveals distinct signaling actions and activation of protein synthesis by Isthmin-1. ***eLife*** *2022 11:e80014. PMID: 36169399.*
Featured in: ***eLife Digest: Better muscles*** https://elifesciences.org/digests/80014/better-muscles

11. Jiang, Z., Zhao, M., Voilquin L., Jung, Y., Aikio, M.A., Sahai, T., Dou, F., Roche, A., Carcamo-Oribe, I, Knowles, J., Wabitsch, M., Appel, E.A., Maikawa, L.C., Camporez, J.P., Shulman, G.I., Tsai, L., Rosen, E.D., Gardner, C., Spiegelman, B.M., **Svensson, K.J.**† Isthmin-1 is an adipokine that promotes glucose uptake and improves glucose tolerance and hepatic steatosis.
Cell Metab. 2021 Sep 7;33(9):1836-1852.e11. PMCID: PMC8429235.
Comments in:
Nat Rev Endocrinol (2021). https://doi.org/10.1038/s41574-021-00569-z News & Views - Heeren, J., Scheja, L. Isthmin 1 — a novel insulin-like adipokine.
BioCentury ISM1 as a therapy for diabetes, fatty liver disease. Aug 27, 2021. https://www.biocentury.com/article/638501/ism1-as-a-therapy-for-diabetes-fatty-liver-disease
Stanford Cardiovascular Institute. Steps towards simultaneously treating diabetes and fatty liver disease. https://med.stanford.edu/cvi/mission/news_center/articles_announcements/2021/treating-diabetes-and-fatty-liver-disease.html. Sept 21, 2021.
J Diabetes Investig. 2022.;10.1111/jdi.13774. doi:10.1111/jdi.13774 Shimizu T, Takahashi Y, Fujita H, Waki H. Pick the best of both glucose and lipid metabolism.

12. O'Brien, C. G., Ozen, M. O., Ikeda, G., Vaskova, E., Jung, J. H., Bayardo, N., Santoso, M. R., Shi, L., Wahlquist, C., Jiang, Z., Jung, Y., Zeng, Y., Egan, E., Sinclair, R., Gee, A., Witteles, R., Mercola, M., **Svensson, K.J**., Demirci, U., & Yang, P. C. Mitochondria-Rich Extracellular Vesicles Rescue Patient-Specific Cardiomyocytes From Doxorubicin Injury: Insights Into the SENECA Trial. *Performed experiments and data analyses.
JACC. CardioOncology. 2021 Jul 27;3(3):428-440. PMCID: PMC8463733.

13. Jung, Y., Zhao, M., **Svensson, K.J.**† Isolation, culture, and functional analysis of hepatocytes from mice with fatty liver disease.
STAR Protoc. 2020 Dec 15;1(3):100222. PMCID: PMC7757664.

14. Long, J.Z., Roche, A.M., Berdan, C.A., Louie, S.M., Roberts, A.M., **Svensson, K.J.,** Dou, F.Y., Bateman, L.A., Mina A.I., Deng, Z., Jedrychowski, M.P., Lin, H., Kamenecka, T., Asara J.M., Griffin P.R., Banks A.S., Nomura D.K., Spiegelman B.M. Ablation of PM20D1 reveals N-acyl amino acid control of metabolism and nociception. *Performed experiments and data analyses.
P.N.A.S. 2018 Jul 17;115(29): E6937-E6945. PMCID: PMC6055169

15. Lin, H., Long, J.Z., Roche, A.M., **Svensson, K.J**., Dou, F., Chang, M.R., Strutzenberg, T., Ruiz, C., Cameron, M.D., Novick, S.J., Berdan, C.M., Louie, S., Nomura, D.K., Spiegelman, B.M., Griffin, P.R., Kamenecka, T.M. Discovery of Hydrolysis-resistant Isoindoline N-Acyl Amino Acid Analogs that Stimulate Mitochondrial Respiration. *Performed experiments and data analyses.
J. Med. Chem. 2018 Apr 12;61(7):3224-3230. PMCID: PMC6335027

16. Long, J.Z., **Svensson, K.J.,** Bateman, L.A., Lin, H., Kamenecka, T., Lokurkar, I.A., Lou, J., Rao, R.R., Chang, M.R., Jedrychowski, M., Paulo, J.A., Gygi, S.P., Griffin, P.R., Nomura, D.K., Spiegelman, B.M. PM20D1 secretion by thermogenic adipocytes regulates lipidated amino acid uncouplers of mitochondrial respiration.
Cell. 2016 166(2):424-35. PMCID: PMC4947008.

17. Menard, J.A., Christianson, H.C., Kucharzewska, P., Bourseau-Guilmain, E., **Svensson, K.J.,** Lindqvist, E., Chandran, V.I., Kjellén, L., Bengzon, J., Johansson, M.C., Belting, M. Hypoxia and acidosis induced extracellular lipid uptake promotes metastasis through proteoglycan dependent endocytosis.

Cancer Research. 2016 May 19. pii: canres.2831.2015. PubMed PMID: 27199348.

18. **Svensson, K.J.,** Long, J.Z., Jedrychowski, M.P., Cohen, P., Lo, J.C., Serag, S., Kir, S., Shinoda, K., Tartaglia, J.A., Rao, R.R., Chédotal, A., Kajimura, S., Gygi, S.P., Spiegelman, B.M. A Secreted Slit2 Fragment Regulates Adipose Tissue Thermogenesis and Metabolic Function.
Cell Metabolism. 2016 23(3):454-66 PMCID: PMC4785066.

19. Rao, R.R., Long, J.Z., White, J.P., **Svensson, K.J**., Lou, J., Lokurkar, I., Jedrychowski, M.P., Ruas, J.L., Wrann, C.D., Lo, J.C., Camera, D.M., Lachey, J., Gygi, S., Seehra, J., Hawley, J.A., Spiegelman, B.M. Meteorin-like is a hormone that regulates immune-adipose interactions to increase beige fat thermogenesis.
Cell. 2014 Jun 5;157(6):1279-91. PMCID: PMC4131287.

20. Long, J.Z., **Svensson, K.J**., Tsai, L., Zeng, X., Roh, H.C., Kong, X., Rao, R.R., Lou, J., Lokurkar, I., Baur, W., Castellot, J.J. Jr, Rosen, E.D., Spiegelman, B.M. A smooth muscle-like origin for beige adipocytes.
Cell Metabolism. 2014 May 6;19(5):810-20. PMCID: PMC4052772.

21. Cohen, P., Levy, J.D., Zhang, Y., Frontini, A., Kolodin, D.P., **Svensson, K.J.**, Lo, J.C., Zeng, X., Ye, L., Khandekar, M.J., Wu, J., Gunawardana, S.C., Banks, A.S., Camporez, J.P., Jurczak, M.J., Kajimura, S., Piston, D.W., Mathis, D., Cinti, S., Shulman, G.I., Seale, P., Spiegelman, B.M. Ablation of PRDM16 and beige adipose causes metabolic dysfunction and a subcutaneous to visceral fat switch.
Cell. 2014 Jan 16;156(1-2):304-16. PMCID: PMC3922400.

22. Christianson, H.C., **Svensson, K.J.**, van Kuppevelt, T.H., Li, J.P., Belting, M. Cancer cell exosomes depend on cell-surface heparan sulfate proteoglycans for their internalization and functional activity.
P.N.A.S. 2013 Oct 22;110(43):17380-5. PMCID: PMC3808637.

23. **Svensson, K.J.**, Christianson, H.C., Wittrup, A., Bourseau-Guilmain, E., Lindqvist, E., Svensson, L.M., Morgelin, M., Belting, M. Exosome uptake depends on ERK1/2-heat shock protein 27 signaling and lipid raft-mediated endocytosis negatively regulated by caveolin-1.
J Biol Chem. 2013 Jun 14;288(24):17713-24. PMCID: PMC3682571.

24. Kucharzewska, P., Christianson, H.C., Welch, J.E., **Svensson, K.J.**, Fredlund, E., Ringnér, M., Morgelin, M., Bourseau-Guilmain, E., Bengzon, J., Belting, M. Exosomes reflect the hypoxic status of glioma cells and mediate hypoxia-dependent activation of vascular cells during tumor development.
P.N.A.S. 2013 Apr 30;110(18):7312-7. PMCID: PMC364558.

25. Thelin, M.A., **Svensson, K.J.**, Shi, X., Bagher, M., Axelsson, J., Isinger-Ekstrand, A., van Kuppevelt, T.H., Johansson, J., Nilbert, M., Zaia, J., Belting, M., Maccarana, M., Malmström, A. Dermatan sulfate is involved in the tumorigenic properties of esophagus squamous cell carcinoma.
Cancer Res. 2012 Apr 15;72(8):1943-52. PMCID: PMC3328612.

26. **Svensson, K.J.**, Christianson, H.C., Kucharzewska, P., Fagerstrom, V., Lundstedt, L., Borgquist, S., Jirstrom, K., Belting, M. Chondroitin sulfate expression predicts poor outcome in breast cancer.
Int J Oncol. 2011 Dec;39(6):1421-8. PubMed PMID: 21850370.

27. **Svensson, K.J.**, Kucharzewska, P., Christianson, H.C., Skold, S., Lofstedt, T., Johansson, M.C., Morgelin, M., Bengzon, J., Ruf, W., Belting, M. Hypoxia triggers a proangiogenic pathway involving cancer cell microvesicles and PAR-2-mediated heparin-binding EGF signaling in endothelial cells.
P.N.A.S. 2011 Aug 9;108(32):13147-52. PMCID: PMC3156184.

28. Kucharzewska, P., Welch, J.E., **Svensson, K.J.**, Belting, M. Ornithine decarboxylase and extracellular polyamines regulate microvascular sprouting and actin cytoskeleton dynamics in endothelial cells. ***Exp Cell Res***. 2010 Oct 1;316(16):2683-91. PubMed PMID: 20594968.

29. Wittrup, A., Zhang, S.H., **Svensson, K.J.**, Kucharzewska, P., Johansson, M.C., Morgelin, M., Belting, M. Magnetic nanoparticle-based isolation of endocytic vesicles reveals a role of the heat shock protein GRP75 in macromolecular delivery. ***P.N.A.S.*** 2010 Jul 27;107(30):13342-7. PMCID: PMC2922147.

30. Kucharzewska, P., Welch, J.E., **Svensson, K.J.**, Belting, M. The polyamines regulate endothelial cell survival during hypoxic stress through PI3K/AKT and MCL-1**.** ***Biochem Biophys Res Commun***. 2009 Mar 6;380(2):413-8. PubMed PMID: 19250631.

31. **Svensson, K.J.**, Welch, J.E., Kucharzewska, P., Bengtson, P., Bjurberg, M., Pahlman, S., Ten Dam, G.B., Persson, L., Belting, M. Hypoxia-mediated induction of the polyamine system provides opportunities for tumor growth inhibition by combined targeting of vascular endothelial growth factor and ornithine decarboxylase. ***Cancer Research***. 2008 Nov 15;68(22):9291-301. PubMed PMID: 19010902.

32. Welch, J.E., Bengtson, P., **Svensson, K.**, Wittrup, A., Jenniskens, G.J., Ten Dam, G.B., Van Kuppevelt, T.H., Belting, M. Single chain fragment anti-heparan sulfate antibody targets the polyamine transport system and attenuates polyamine-dependent cell proliferation. ***Int J Oncol.*** 2008 Apr;32(4):749-56. PubMed PMID: 18360702.

33. Mani, K., Sandgren, S., Lilja, J., Cheng, F., **Svensson, K.**, Persson, L., Belting, M. HIV-Tat protein transduction domain specifically attenuates growth of polyamine deprived tumor cells. ***Mol Cancer Ther.*** 2007 Feb;6(2):782-8. PubMed PMID: 17308074.

34. Gardner, R.A., Belting, M., **Svensson, K.**, Phanstiel, O 4th. Synthesis and transfection efficiencies of new lipophilic polyamines. ***J Med Chem.*** 2007 Jan 25;50(2):308-18. PubMed PMID: 17228872.

Peer-reviewed Reviews and Book Chapters

35. Lone, J.B., Long, J.Z., **Svensson, K.J.**† Size matters: the biochemical logic of ligand type in endocrine crosstalk. ***Life Metabolism,*** 2023 https://doi.org/10.1093/lifemeta/load048

36. Reghupaty, S.C., Dall, N.R., **Svensson, K.J.**† Hallmarks of the metabolic secretome. ***Trends Endocrinol Metab.*** 2023 Oct 14:S1043-2760(23)00195-9. doi: 10.1016/j.tem.2023.09.006. PMID: 37845120.

37. Coassolo, L, Danneskiold-Samsøe, N.B., Zhao, M., Allen, H., **Svensson, K.J.**† New players of the adipose secretome: therapeutic opportunities and challenges. ***Curr Opin Pharmacol.*** 2022 Oct 1;67:102302. PMID: 36195010 PMCID: PMC9772291

38. Zhao, M., Jung Y., Jiang, Z., **Svensson, K.J.**† Regulation of energy metabolism by receptor tyrosine kinase ligands. ***Front Physiol.*** 2020; 11: 354. PMCID: PMC7186430
Comment in: Ladbury J: **Faculty Opinions**, 28 May 2020; 10.3410/f.737907472.793574673

39. Christianson, H.C., **Svensson, K.J**., Belting, M. Exosome and microvesicle mediated phene transfer in mammalian cells.
Semin Cancer Biol. 2014 Oct; 28:31-8. PMID: 24769057.

40. **Svensson, K.J**., Belting, M. Role of extracellular membrane vesicles in intercellular communication of the tumour microenvironment.
Biochem Soc Trans. 2013 Feb 1;41(1):273-6. PMID: 23356296.

41. Marko-Varga, G., Végvári, Á., Welinder, C., Lindberg, H., Rezeli, M., Edula, G., **Svensson, K.J.**, Belting, M., Laurell, T., Fehniger, T.E. Standardization and utilization of biobank resources in clinical protein science with examples of emerging applications.
J Proteome Res. 2012 Nov 2;11(11):5124-34. PMID: 22607352.

42. Welch, J., **Svensson, K.**, Kucharzewska, P., Belting, M. Heparan sulfate proteoglycan-mediated polyamine uptake.
Methods Mol Biol. 2011; 720:327-38. PMID: 21318883.

Peer-reviewed conference abstracts

1. Zhao M., Banhos Danneskiold-Samsøe, N., Voilquin, L., Jiang, Z., **Svensson, K.J.**† Isthmin-1 As A Modulator Of Metabolic Health. LBMON185. ***J Endocr Soc.*** 2022 Nov 1;6(Suppl 1):A587. doi: 10.1210/jendso/bvac150.1216. PMCID: PMC9625610.

2. O'Brien, C. G., Ozen, M. O., Vaskova, E., Jung, J., Santoso, M., Shi, L., Wahlquist, C. A., Jiang, Z., Jung, Y., Ikeda, G., Zeng, Y., Sinclair, R., Gee, A., Witteles, R. M., Mercola, M., **Svensson, K**., Demirci, U., Yang, P. C. Mesenchymal Stem Cells Rescue Patient-Specific Cardiomyocyte Viability and Function Following Doxorubicin Injury via Microvesicle Mediated Mitochondrial Transfer to Recapitulate Human Clinical Trial Results. ***Circulation.*** 142 (Suppl_3), A14859-A14859.

PATENTS (5 total patent applications)

BRINP3-derived peptides for obesity and digestive disorders **Svensson, K.J**., Danneskiold-Samsoee, N.B., Coassolo, L. Lone, B.L.	Invention disclosure S24-073 02/21/2024
Materials and methods for treating cardiac dysfunction Blau, H., Nalbandian, M., **Svensson, K.J**.	US PCT conversion pending US Patent Application Priority date 02/05/2024
BRINP2-derived peptide compositions for treating obesity and weight management **Svensson, K.J**., Voilquin, L.	WO PCT conversion pending US Patent Application Priority date 08/02/2022
Therapeutic uses of Isthmin protein **Svensson, K.J**., Voilquin, L. *Highlighted in: Mucke HA. Patent highlights February–March 2023. Pharmaceutical Patent Analyst. Future Science; 2023 Sep 1;12(5):205–212.*	WO2023010049A1 US Patent Application No. 63/226,600 Priority date 07/28/2021
Methods for identification, assessment, prevention, and treatment of metabolic disorders using Slit2 Spiegelman B.M., **Svensson, K.J.**	WO/2017/011763 US Patent Application. 15/741,326 Priority date 07/16/2016

ADVISORY COMMITTEES

2024	NIH NIDDK Advisory Council, Diabetes Heterogeneity Working Group
2024-2026	Co-chair, American Diabetes Association's Scientific Session Meeting Planning Committee, Insulin Action/Molecular Metabolism, 2-year term

BOARD MEMBERSHIPS

2024-current	Scientific Advisory Board, Kyttaro Ltd

EDITORIAL BOARDS

2024-current	Editorial Board, *Diabetes*, Elected for a 3-year term
2022-current	Associate Editor, *Endocrine Reviews* (Oxford Academic), Elected for a 3-year term
2021-current	Advisory Board, *STAR Protocols* (Cell Press)

EDITORIAL SERVICE

2013-current Ad hoc Reviewer (selected from >40 journals):

Diabetes	Nature
Cell Metabolism	Nature Metabolism
Cell Reports	Nature Communications
JCI Insight	Trends in Pharmacological Sciences (Cell Press)
Molecular Metabolism	PLOSBiology

GRANT REVIEWER

NIH Reviewer

10/2023	NIH Study Section Pathophysiology of Obesity and Metabolic Disease (POMD) ***Standing member (2023-2026)***
06/2023	NIH Study Section Endocrine and Metabolic Systems Sciences, EMS-K (10)B (SBIR/STTR) *Ad hoc*
11/2022	NIH Study Section Endocrinology, Metabolism, Nutrition and Reproductive Sciences, EMS-K (10)B (SBIR/STTR) *Ad hoc*
07/2022	NIH Metabolic Phenotyping in Live Models of Obesity and Diabetes GRB-J O1 (MPMOD) U24/U2C Consortium Review. *Ad hoc*
03/2022	NIH Study Section Endocrinology, Metabolism, Nutrition and Reproductive Sciences, EMNR-K (10) (SBIR/STTR) *Ad hoc*
10/2021	NIH Study Section Pathophysiology of Obesity and Metabolic Disease (POMD). *Ad hoc*
06/2020	NIH Study Section Molecular and Cellular Endocrinology (MCE), ECR. *Ad hoc*

National and International Grant Reviewer

11/2023	American Heart Association (AHA), 2024 Fellowship Basic Science, Cell Transport/Lipoproteins and Lipid Metabolism.
06/2023	American Heart Association (AHA), Second Century Early Career Faculty Independence Award Review Committee.

04/2023 Harold Hamm Diabetes Center at the University of Oklahoma Health Sciences Center, External reviewer for Pilot Grants.

01/2023 American Heart Association (AHA), Innovative Project Award Review Committee.

02/2023 Israel Science Foundation (ISF), Research Grant Reviewer.

11/2022 American Heart Association (AHA), 22-23 Institutional Undergraduate Student Award Review Committee.

11/2022 American Heart Association (AHA), 2023 Fellowship Basic Science, Cell Transport/Lipoproteins and Lipid Metabolism.

07/2022 Israel's Ministry of Innovation, Science and Technology, Grant Reviewer in Health and Medicine on the topic of Drug and pharmaceutical development.

Stanford Internal Grant Reviewer

2021-2024 MCHRI Postdoctoral Support Review Panel (3-year term, twice per year)
2021 ChemH testing molecular hypotheses in human subjects for junior investigators
2021 SDRC reviewer for Pilot and Feasibility grants (UC Berkeley/UC Davis)

INVITED SEMINARS (66 total invited talks*, TBH = to be held)*

Keynote Talks

09/2022 **Keynote speaker** at 2022 Stanford-HBMC Virtual Research Retreat, Stanford, CA, USA
06/2022 **Keynote speaker** at the Metabolism Mini-Symposium UCSF Liver Center and UC Berkeley, Department of Nutritional Science & Toxicology, Berkeley, CA, USA

International and National Seminars

08/2024 *(TBH)* 2024 FASEB "Nutrient Sensing and Signaling in Metabolism", Southbridge, MA, USA
07/2024 *(TBH)* 2024 FASEB "Molecular Metabolism: From Cell Biology to Systems Physiology", Southbridge, MA, USA
06/2024 *(TBH)* 84th American Diabetes Association, Orlando, FL, USA
04/2024 *(TBH)* Metabolic Physiology Meeting, Hilton Head Island, SC, USA
04/2024 *(TBH)* City of Hope, Arthur Riggs Diabetes & Metabolism Research Institute, CA, USA
10/2023 University of Pennsylvania, Perelman School of Medicine, Institute for Diabetes, Obesity and Metabolism (IDOM), Philadelphia, PA, USA
09/2023 University of Iowa Molecular Medicine, Iowa City, IA, USA
05/2023 Keystone Symposia: Type 2 Diabetes: Understanding its early drivers and the road to therapeutics, Palm Springs, CA, USA
04/2023 4th International Conference on Cell and Experimental Biology, Houston, TX, USA
01/2023 Keystone Symposia: Bioenergetics in Health and Diseases, Keystone, CO, USA
01/2023 Session chair, Workshop 2: New regulators of Bioenergetics Keystone Symposia: Bioenergetics in Health and Diseases, Keystone, CO, USA
01/2023 McGill University, Department of Biochemistry, Montreal, Quebec, Canada
11/2022 Weill Cornell/Stanford Cardiovascular Research Symposium, Stanford, CA, USA and Weill Cornell Medical School, New York City, NY, USA
10/2022 Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA
08/2022 **Plenary speaker**, Keystone Symposia: Inter Organ Crosstalk in Non-Alcoholic Steatohepatitis/Adipose Biology, Whistler, Vancouver, BC, Canada.

04/2022 3rd International Conference on Cell and Experimental Biology, Boston, MA, USA
03/2022 Cornell University, Division of Nutritional Sciences, Ithaca, NY, USA
01/2022 Mt Sinai and Albert Einstein College of Medicine, Diabetes Research Center, NY, USA
10/2021 University of British Columbia, Dept. of Cellular and Physiol. Sciences, Canada
10/2021 University of Manitoba, Department of Physiology and Pathophysiology, Canada
05/2021 8th Helmholtz Diabetes Conference, Munchen, Germany
06/2019 ExoFest 2019 System Biosciences Conference, San Francisco, CA, USA
05/2019 UC Berkeley, Dept. of Nutritional Sciences and Toxicology, Berkeley, CA, USA
03/2019 Systems Biosciences, San Fransisco, CA, USA
07/2018 ExoFest 2018 System Biosciences Conference, San Francisco, CA, USA
01/2018 Keystone Symposia: Organ Crosstalk in Obesity and NAFLD, Keystone, CO, USA
01/2017 Beth Israel Deaconess Medical Center, Cardiovascular Basic Research Division, Boston, MA, USA
03/2016 Keystone Symposia: New Therapeutics for Obesity and Diabetes, San Diego, CA, USA
05/2016 Novo Nordisk A/S, Research & Development, Obesity unit, Malov, Denmark
05/2016 University of Copenhagen, Center for Metabolic Research, Copenhagen, Denmark
04/2015 Keystone Symposia: Brown and Beige fat, Snowbird, Salt Lake City, UT, USA
02/2012 Keystone Symposia: Advances in Hypoxic Signaling, Banff, Calgary, Alberta, Canada
04/2011 American Association of Cancer Research Conference, Orlando, FL, USA
04/2012 International Society of Extracellular Vesicles, Gothenburg, Sweden
09/2010 AACR Metastasis and the Tumor microenvironment, Philadelphia, PA, USA
09/2008 North American Vascular Biology Organization, Hyannis, MA, USA

Local Seminars

04/2023 Regenerative Medicine Seminar Series, Stanford, CA, USA
03/2023 Merck SEEDs Symposium, San Francisco, CA, USA
12/2022 SPARK program in translational research, Stanford, CA, USA
09/2022 CVI Faculty-Staff meeting, Stanford Cardiovascular Institute, Stanford, CA, USA
06/2022 Innovative Medicines Accelerator, Sarafan ChemH, Stanford, CA, USA
12/2021 SPARK program in translational research. Stanford, CA, USA
10/2021 Stanford CBI 2021 Faculty Mentor Lightning Talks, Stanford, CA, USA
06/2021 CVI Undergraduate Summer Research Program, Stanford University, Stanford, CA
05/2021 MSTP Physician Scientist Hour, Stanford University, Stanford, CA, USA
12/2020 Pediatric Endocrinology Seminar Series, Stanford University, Stanford, CA, USA
11/2020 5th Annual Frontiers in Diabetes Symposium, Stanford University, Stanford, CA, USA
06/2020 CVI Undergraduate Summer Research Program, Stanford University, CA, USA
11/2019 Obesity, Diabetes & Metabolism Research Retreat, Session chair, UCSF, CA, USA
10/2019 Bay Area Metabolism Meeting (BAMM), Stanford University, Stanford, CA, USA
06/2019 The Baxter Foundation Finalist, Stanford University, Stanford, CA, USA
05/2018 Stanford Diabetes Research Center (SDRC), Seminar series, CA, USA
03/2018 Stanford University, Div. of Cardiovascular Medicine, Stanford, CA, USA
01/2017 Beth Israel Deaconess Medical Center, Boston, MA, USA
12/2016 Dana Farber Cancer Institute Annual Joint Retreat, Boston, MA, USA
10/2015 Harvard Medical School Annual Cell Biology Retreat, Boston, MA, USA
09/2014 Harvard Medical School, Microvesicles and Exosomes Seminars, Boston, MA, USA
09/2011 Department of Oncology Seminar Series. Lund University, Sweden

NATIONAL AND LOCAL MEETING ORGANIZATION

09/2024 *(TBH)* Organizer, 5th Bay Area Metabolism Meeting (BAMM) Stanford, CA, USA
12/2023 Moderator, Stanford-Upenn-Duke-Weill Cornell Symposium, Stanford, CA, USA
09/2023 Organizer, 4th Bay Area Metabolism Meeting (BAMM) Stanford, CA, USA
04/2023 Co-organizer, 7th Annual Frontiers Diabetes Research Symposium Stanford, CA, USA

09/2022 Organizer, 3rd Bay Area Metabolism Meeting (BAMM) Stanford, CA, USA
04/2022 Poster judge, 6th Frontiers in Diabetes Research Symposium, Stanford, CA, USA
09/2020 Organizer, 2nd Bay Area Metabolism Meeting (BAMM) Virtual Meeting CA, USA
09/2019 Founder and organizer, 1st Bay Area Metabolism Meeting (BAMM), Stanford, CA, USA bayareametabolismmeeting.com
06/2019 Co-organizer, 2019 ExoFEST System Biosciences Conference, San Francisco, CA, USA

PROFESSIONAL ORGANIZATIONS

2021-current Member, Endocrine Society (Oxford)
2020-current Member, American Heart Association (AHA)
2021 Member, American Society for Biochemistry and Molecular Biology (ASBMB)
2019 Member, American Diabetes Association (ADA)
2019 Member, American Association for Cancer Research (AACR)

UNIVERSITY ADMINISTRATIVE SERVICE

Leadership Roles

2022-current Head of the Stanford Metabolic Core Facility, Stanford Diabetes Research Center
2019-current Affinity Group Leader of the Metabolism and Signaling group at the Stanford Diabetes Research Center

Departmental Services, Pathology Department

2022 Pathology Research Retreat Poster Review Committee
2019-2022 Pathology Department Research Committee (3-year term)
2019 Faculty Search Committee

University Services

2023-2024 Endocrinology Faculty Search Committee
2023 Cancer Biology Admissions interviews
2020-2021 MSTP MD-PhD Program Admissions Committee
2020-2023 Endocrinology Fellowship Admissions interviews
2019-2020 Cancer Biology Admissions Committee
2018 Faculty review workshop (Tackling your K), Reviewer, CVI, Stanford
2017 Speaker at K99 Grant Writing Workshop, Harvard Medical School

TEACHING

Formal teaching

2024 BIO-C224 Advanced Cell Biology Winter, Discussion leader, 2h/wk for 8 weeks
2022 BIO-C224 Advanced Cell Biology Winter, Discussion leader, 2h/wk for 8 weeks
2021 CBIO-240 Molecular and Genetic Basis of Cancer, Fall, Lecturer, 1h
2021 CBIO-240 Molecular and Genetic Basis of Cancer, Fall, Discussion leader, 1h/wk for 10 wks
2021 BIO-C214 Advanced Cell Biology, Winter, Lecturer, 1.5h
2021 BIO-C214 Advanced Cell Biology, Winter, Discussion leader, 1h/wk for 8 wks
2020 CBIO-240 Molecular and Genetic Basis of Cancer, Fall, Discussion leader, 1h/wk for 10 wks
2019 CBIO-240 Molecular and Genetic Basis of Cancer, Fall, Discussion leader, 2h/wk for 10 wks
2019 BIOS-263 Biosciences Grant Writing Academy, Discussion leader, 2h total
2018 BIOS-242 Biosciences Grant Writing Academy (11/2/2018, 10/12/2018, 10/11/2018) 6h
2018 CBIO-242 Lecture, Cancer Biology Graduate Program (10/3/2018) Lecturer, 1h
2012 Summer projects for medical students, Examiner, Lund University
2011 Radiobiology, Medical Physicist Program, Lund University
2010-2011 Cell Biology for Medical Students, Discussion leader, Lund University
2010 Anatomy for Medical Students, Laboratory instructor, Lund University

THESIS DEFENSE COMMITTEES

2024 Thesis committee, Songnan Wang, Supervisor Dr. Lingyin Li, Biochemistry
2023/11 Thesis non-reader, Justin Donnelly, Supervisor: Carolyn Bertozzi, Chemistry
2021/08 Thesis chair, Vy Nguyen, Supervisor: Seung Kim, Developmental Biology
2021/09 Thesis chair, Anthony Cordova, Supervisor Dr. Lingyin Li, Biochemistry
2021/03 Thesis chair, Hannah Moeller, Supervisor Dr. Justin Annes, CSB

OUTREACH AND MINORITY-ORIENTED TEACHING ACTIVITIES

2023 Mentor: Community College Outreach Program, Stanford University, 10 weeks
2022 Mentor: Stanford Cardiovascular Institute (CVI) Summer Program, 10 weeks
Research Experience (SURE) for underrepresented minorities, 10 weeks
2021 Mentor: Stanford-Meharry Summer Research Program, 10 weeks
2021 Mentor: American Heart Association (AHA) Supporting Undergraduate Research Experience for underrepresented minorities, 10 weeks
2020 Mentor: Stanford Cardiovascular Institute (CVI) Summer Program, 10 weeks

MENTORING

Postdoctoral Fellows, Research Scientists, and Medical Fellows

2023-current: Jameel Lone, Ph.D.
2023-current: Saranya Reghupaty, Ph.D.
2023-current: Patil Kavarian, M.D., T32, MCHRI, Stanford Pediatrics Fellow (2023)
2022-current: Lianna Wat, Ph.D., Dean's Fellowship, Lindau Nobel Laureate, AHA Fellowship (2024)
2021-current: Gentaro Ikeda, Ph.D. (co-mentored), AHA Career Development Award (2022)
2020-current: Laetitia Coassolo, Ph.D., AHA Fellowship, Dean's Fellowship (2022-2023)
2018-current: Meng Zhao, Ph.D., **NIH K99/R00** NIAMS (2023), AHA Fellowship (2021)
2020-2023: Niels Danneskiold-Samsoee, Ph.D., Carlsberg Foundation Fellowship (2020)
2019-2023: Ewa Bielzcyk-Maczynska, Ph.D. (co-mentored), AHA Fellowship (2018)
2018-2021: Yunshin Jung, Ph.D., B. Carrington Poster Award; Next: Research Scientist, MedPacto

Life Science Research Professionals (LSRP) and Research Technicians

2020-current: Quennie Nguyen, B.S., Stanford University
2023: Tina Asemi, B.S., UC Santa Cruz; Next: Ph.D. student, Georgetown University
2021-2022: Hobson Allen, B.S., Colorado State; Next: Ph.D. student, Texas A&M
2020-2021: Tanushi Sahai, B.S., UC Berkeley; Next: Researcher, Synthego
2018-2020: Zewen Jiang, B.S., M.S., UC Berkeley, Poster Awards; Next: Ph.D. student, UCSF

Graduate and Rotation Students

2023-current: Karen Garelli, CBIO, Stanford University, Best Poster Award (2023)
2018: Nancy Li, CBIO, Stanford University

Undergraduate, High School, and Summer Students

2022-current: Aayan Patel, Stanford University
2022-2023: Deniz Kavi, Stanford University; Next: Founder, Tamarind.bio
2022-2023: Galia Santana-Oikawa, Stanford University
2022-2023: Khusbu Adhikari, Stanford University
2023 (2 mo): Sydney Li, CCOP-CORE Summer Internship
2022-2023: Blythe Broido, Stanford University
2021-2022: Bryan Romero, Stanford University
2022 (2 mo): Danielle Young, Claflin University, AHA SURE Award
2022 (2 mo): Isaiah Jimenez, St. Mary's College of California, CVI Summer Award
2021 (2 mo): Taylor Brown, Meharry Medical School, Stanford-Meharry Summer Research Program
2020-21 (2 mo): Nickeisha Cuthbert, Claflin University, CVI and AHA SURE Awards

2020-2021: David Toomer, Stanford University
2020-2021: Shrika Paramasivam, Texas High School, Science Fair Award, ASBMB
2019 (2 mo): Adam O'Regan, Stanford University; Next: Pattern Ag
2018-2019: Allison Schwartz, Stanford University

RESEARCH SUPPORT

ACTIVE

R01 DK125260-01 (Svensson, Katrin – SPO 163663) 07/01/2020 - 06/30/2025 3 calendar
National Institutes of Health
Control of glucose homeostasis through the insulin independent Isthmin pathway
Major Goals: The overall objectives in this proposal are to establish how Ism1 can control blood glucose by determining the signaling effectors and cell surface receptor that mediate the action, determine the endogenous physiological function for Ism1, and evaluate the pharmacological potential of Ism1 as a therapeutic target.
Role: PI

R01 DK120565-01 (Knowles, Joshua – SPO 137047) 09/01/2019 – 05/31/2024 0.3 calendar
National Institutes of Health
Characterization of novel insulin resistance genes by gene editing, high-throughput phenotyping and in vivo studies
Major Goals: Establish causal genes and mechanisms of action for novel genes involved in the development of insulin resistance, by combining a range of innovative methods including high throughput gene perturbations followed by single-cell transcriptomics, in vitro and in vivo experiments, to characterize loci established using human genetics.
Role: Co-Investigator

R01 HL156945-01 (Phillip Yang– SPO 192379) 09/01/2022-08/31/2026 0.6 calendar
National Institutes of Health
Mitochondria-rich microvesicles for restoration of intracellular bioenergetics
Major Goals: The major goals are to investigate how microvesicles can protect against cardiac injury.
Role: Co-Investigator

P30 DK116074-06 (Kim, Seung – SPO 128573) 08/01/2022-06/30/2027
National Institutes of Health 0.36 calendar (Svensson)
Stanford Diabetes Research Center 1 calendar (Svensson lab Postdoctoral fellow)
Major Goals: The aims of the Administrative Core include fostering membership of appropriate investigators in the SDRC to stimulate and ensure the growth and maintenance of the vibrant research investigator base, enriching and guiding the career development of junior investigators in diabetes-related research, enhancing the environment of training, education and knowledge about opportunities in investigations of diabetes at Stanford, and providing a framework for continuous growth and evolution of resources at Stanford, including links to relevant local, national and international constituencies, that enhance diabetes-related research.
Role: Affinity Group Leader of the Metabolism and Signaling Group and Metabolic Core director

Innovative Project Award (Svensson, Katrin – SPO 295509) 07/01/2023-06/30/2025 0.6 calendar
American Heart Association
Novel strategies for improving hepatic lipid metabolism and cardiovascular health
Major Goals: The major goals are to investigate a new mechanism by which fructose is transported into the liver.
Role: PI

Merck SEEDS award (Svensson, Katrin– SPO 312666) 12/01/2023 – 04/30/2025 0.12 calendar
Merck Co., Inc.
A BRINP2-derived peptide for treating obesity and weight-related disorders

Major Goals: The overall goals are to interrogate the role of an early-stage therapeutic lead — a peptide derived from the prohormone BRINP2—that controls appetite.
Role: PI

Innovative Medicines Accelerator (Svensson, Katrin) 07/01/2022-07/01/2024
Stanford University, Sarafan ChemH Institute
Major Goals: The major goals are to develop Isthmin-1 as a protein therapeutic in collaboration with the Sarafan ChemH IMA team for protein engineering and receptor identification of human Isthmin-1.
Role: PI

SPARK Translational award (Svensson, Katrin) 01/01/2022-12/31/2024
Stanford University
Development of appetite-suppressing peptide analogs for the treatment of obesity
Major Goals: The major goal is to perform SAR studies to optimize a peptide for the treatment of obesity.
Role: PI

MCHRI Pilot/Early Career Award (Svensson, Katrin) 07/01/2023-06/30/2024 0.12 calendar
Stanford University
Investigating a novel peptide to treat hyperphagia in children with Prader-Willi Syndrome
Major Goals: The main goals of this project are to determine the mechanism behind how the BRP peptide reduces feeding and whether it can be applied for therapeutic use to reduce hyperphagia and obesity in children with PWS.
Role: PI

COMPLETED

Merck SEEDS award (Svensson, Katrin - SPO 133352) 10/01/2020 – 09/30/2021
Merck Co., Inc.
Identification of molecular drivers and biomarkers for NASH
Major Goals: The major goal is to interrogate the roles of novel genes involved in lipid accumulation and hepatic inflammation and fibrosis.
Role: PI

SPARK Spectrum Pilot Award (Yang, Phillip) 12/02/2020-12/31/2021
Stanford University
Rapid translation of iPSC-derived extracellular vesicles for mitochondrial biogenesis
Major goals: The aims are to use iPSC-derived extracellular vesicles in pigs with cardiac dysfunction.
Role: Co-Investigator

NIH R00 DK11191604 (Svensson, Katrin - SPO 133352) 03/15/2018 - 09/14/2021
National Institutes of Health
The role of circulating Slit2 in adipose thermogenesis and diabetes
Major Goals: The major goal of this study is to understand the mechanism and physiology of the circulating factor Slit2 in energy homeostasis.
Role: PI

Jacob Churg Research Award (Svensson, Katrin) 02/01/2019-01/31/2020
Stanford University, Department of Pathology
The function of Ism1 as an insulin-independent hormone
Major goals: The major goal of this study is to investigate insulin-independent hormones.
Role: PI

McCormick and Gabilan Award (Svensson, Katrin) 09/01/2018-08/31/2020

Stanford University, Faculty of Diversity and Inclusion
The role of circulating Isthmin-1 in diabetes and non-alcoholic fatty liver disease
Major goals: The major goal of this study is to understand the mechanism of Isthmin-1 in fatty liver disease.
Role: PI

NIH K99DK111916-02 (Svensson, Katrin) 09/08/2016-03/14/2018
National Institutes of Health
The role of circulating Slit2 in adipose thermogenesis and diabetes
Major goals: The major goals are to investigate Slit2 in adipose thermogenesis and diabetes.
Role: PI