

Lothar Hennighausen, Ph.D.

Current Positions

2019 – Present **Senior Investigator**
Chief, Section of Genetics and Physiology
LCMB/NIDDK/NIH
Bethesda, Maryland 20892

Former Positions

1997 – 2019 **Senior Investigator**
Chief, Laboratory of Genetics and Physiology
NIDDK/NIH

1991 - 1997 **PI, Group leader**
Chief, Developmental Biology Section
NIDDK/NIH

1985 - 1991 **PI, Group leader**
NIDDK/NIH

Education

Harvard Medical School, Post-doctoral fellow, Genetics, 1985
University of Köln (Germany), Doctorate, Genetics, 1982
University of Köln (Germany), Diploma, Biology, 1979
University of Edinburgh (Scotland), Honors Program, Molecular Biology, 1978
University of Marburg (Germany), BS (Vordiplom), Biology, 1977

Honors, Awards, and Recognitions (selection)

- Hans-Fischer Senior Fellow, Institute for Advanced Study (IAS), Technical University Munich (TUM), Germany (2020)
- Global Visiting Professor, Technical University Munich (TUM), Germany (2019)
- Director's award, NIH, for outstanding accomplishments (2019)
- Keynote Speaker, FASEB Conference, Growth Hormone / Prolactin Family (2019)
- Student invited Seminar Series, Case Western Reserve University, Speaker (2018)
- Organizer, Symposium on CRISPR Genome engineering, NIH Research Festival (2018)
- Director's Award, NIDDK/NIH (2017)
- Orloff Award, NHLBI/NIH (2017)
- Keynote Speaker, Mammary Gland Biology Gordon Conference (2016)
- Selected, [Key figure in mammary gland biology and cancer](#) (2015)
- Plenary Speaker, Annual Meeting, Cytokine Society, San Francisco (2013)
- Distinguished Lecture Series, Lady Davis Institute, McGill, Montreal (2012)

- Keynote Speaker, Graduate Research Symposium, Memorial University, St. John's, Canada (2011)
- Plenary Speaker, Endocrine Society, Annual meeting, San Diego (2010)
- Plenary Speaker, Korean Society for Molecular and Cellular Biology, Annual meeting, Seoul, Republic of Korea (2009)
- Member and Chair (2009-2014), Scientific Advisory Board, Georg-Speyer Haus, Frankfurt, Germany (2009-present)
- Distinguished World Class Scholar, Korean Society of Science and Engineering (2008)
- Mercator Professorship, Deutsche Forschungsgemeinschaft (2007)
- Plenary Speaker, Keystone Symposia, Whistler, Canada (2004)
- NIDDK minority mentoring award (~2004)
- Olof Pearson Award, Case Western Reserve University, Cleveland (2003)
- Humboldt Research Prize, Alexander von Humboldt Foundation (2002)
- Humboldt Fellow, Alexander von Humboldt Foundation (1992)
- Selected, National Press Club, Mammary Gland Bioreactor, Washington D.C. (1987)
- Deutsche Forschungsgemeinschaft, post-doctoral fellowship (1983)
- EMBO, short-term research fellowship at Edinburgh University (1980)
- Studienstiftung des Deutschen Volkes, graduate student fellowship (1978)

Bibliography

[ORCID](#)

[Google Scholar](#)

[PubMed](#)

h-index: 115

total citations: >44,000

publications: 321

1. Lee SG, Furth PA, **Hennighausen L**, Lee HK (2024) Variant- and Vaccination-Specific Alternative Splicing Profiles in SARS-CoV-2 Infections. *iScience* 27: 109177 (PMID: 38414855).
2. Hoffmann M, Willruth LL, Dietrich A, Lee HK, Knabl L, Trummer N, Baumbach J, Furth PA, **Hennighausen L**, List M (2024) Blood transcriptomics analysis offers insights into variant-specific immune response to SARS-CoV-2. *Scientific Reports*, 14:2808 (PMID: 38307916).
3. Niase A, Louis K, Lenoir O, Schwarz C, Xu X, Couturier A, Dobosziewicz H, Corchia A, Placier S, Vandermeersch S, **Hennighausen L**, Frère P, Galichon P, Surin B, Ouchelouche S, Louedec L, Migeon T, Verpont MC, Yousfi N, Buob D, Xu-Dubois YC, François H, Rondeau E, Mesnard L, Hadchouel J, Luque Y (2024) Protective role of the podocyte IL-15 / STAT5 pathway in focal and segmental glomerulosclerosis. *Kidney International Reports* 9: 1093-1106.
4. Lee HK, Willi M, Liu C, **Hennighausen L** (2023) Cell-specific and shared enhancers control a multi-gene locus active in mammary and salivary glands. *Nature Communications* 14: 4992 (PMID: 37591874)

5. Hoffmann M, Trummer N, Jankowski j, Lee HK, Willruth LL, Lazareva LL, Yuan K, Baumgarten N, Schmidt F, Baumbach J, Schulz MH, Blumenthal DB, **Hennighausen*** L, List M* (2023) TF-Prioritizer: a java pipeline to prioritize condition-specific transcription factors. [GigaScience](#), 12, giad026. * Senior authors (PMID: 37132521)
6. Schultz AB, Kugler DG, Niveló L, Vitari N, Doyle LP, Ristin S, **Hennighausen** L, O'Shea JJ, Jankovic D, Villarino AV (2023) T cell intrinsic STAT1 signaling prevents aberrant Th1 responses during acute toxoplasmosis. [Frontiers in Immunology](#) (PMID: 37559725)
7. Hoffmann M, Schwartz L, Octavia-Andreea C, Trummer N, Willruth L, Jankowski J, Lee HK, Baumbach J, Furth PA, **Hennighausen** L, List M (2023) circRNA-sponging: a pipeline for extensive analysis of circRNA expression and their role in miRNA sponging. [Bioinform Adv.](#) (PMID: 37485422)
8. Lee KH, Hoechstetter MA, Buchner M, Pham TT, Huh JW, Müller K, Zange S, von Buttlar H, Gírl P, Wölfel R, Brandmeier L, Pfeuffer L, Furth PA, Wendtner CM, **Hennighausen** L (2023) Robust transcriptional response to COVID-19 immunization despite ineffective humoral immune responses in CLL patients. [Blood Advances](#) 7:2214-2227 (PMID: 36630562)
9. Villarino AV, Laurence ADJ, Davis FP, Niveló L, Brooks SR, Sun HW, Jiang K, Afzali B, Frasca D, **Hennighausen** L, Kanno Y, O'Shea JJ (2022) A central role for STAT5 in the transcriptional programming of helper T cell metabolism. [Science Immunology](#) (PMID: 36427325)
10. Lee HK, Knabl L, Walter M, Furth PA, **Hennighausen** L (2022) Limited cross-variant response from SARS-CoV-2 Omicron BA.2 in naïve but not previously infected outpatients. [iScience \(News\)](#)
11. Lee HK, Knabl L, Walter M, Knabl Sr L, Dai Y, Füßl M, Caf Y, Jeller C, Knabl P, Obermoser M, Baurecht C, Kaiser N, Zabernigg A, Wurdinger GM, Furth PA, **Hennighausen** L (2022) Prior vaccination exceeds prior infection in eliciting innate and humoral immune responses in Omicron infected outpatients. [Frontiers in Immunology](#) (PMID: 35784346) ([News](#)).
12. Lee HK, Go JY, Sung HS, Kim SW, Walter M, Knabl L, Furth PA, **Hennighausen** L, Huh JW (2022) Heterologous ChAdOx1-BNT162b2 vaccination in Korean cohort induces robust immune and antibody responses that includes Omicron. [iScience](#)
13. Knabl L, Lee HK, Walter M, Furth PA, **Hennighausen** L (2022) Immune transcriptome in adult-onset Still's disease with mild flare following administration of mRNA vaccine BNT162b2. [Rheumatology](#), (PMID: 35532082)
14. Lee HK, Knabl L, Moliva JI, Knabl Sr. L, Werner AP, Boyoglu-Barnum S, Kapferer S, Pateter B, Walter M, Sullivan N, Furth PA, **Hennighausen** L (2022) mRNA vaccination in octogenarian nuns 15 and 20 months after recovery from COVID-19 elicits robust immune and antibody responses that include Omicron. [Cell Reports](#) 39:110680 ([News](#))
15. Lee HK, Knabl L, Knabl Sr. L, Wieser M, Mur A, Zabernigg A, Schumacher J, Kaiser N, Furth PA, **Hennighausen** L (2022) Immune transcriptomes analysis of COVID-19 patients infected with SARS-CoV-2 variants carrying the E484K escape mutation identifies a distinct gene module. [Scientific Reports](#), 12, 2784; [Picked up by three News Outlets](#).
16. Knabl L, Lee HK, Wieser M, Mur A, Zabernigg A, Knabl Sr. L, Rauch S, Bock M, Schumacher J, Kaiser N, Furth PA, **Hennighausen** L (2022) BNT162b vaccination enhances interferon-JAK-STAT-regulated antiviral programs in COVID-19 patients infected with the SARS-CoV-2 Beta variant. [Communications Medicine](#) 2:17 (PMID: 35465056)

17. Lee HK, Jung O, **Hennighausen L** (2021) JAK inhibitors dampen activation of interferon-stimulated transcription of ACE2 isoforms in human airway epithelial cells. [Commun. Biology](#) (IF: 6.2)
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19. Lee HK, Knabl L, Pipperger L, Volland A, Furth PA, Smith HE, Knabl L, Bellmann R, Bernhard C, Kaiser N, Ganzer H, Strohle M, Walser A, von Laer D, **Hennighausen L** (2021) Immune transcriptomes of highly exposed SARS-CoV-2 asymptomatic seropositive versus seronegative individuals from the Ischgl community. [Scientific Reports 11:4243](#) (IF: 4.9). Mentioned in one [policy document](#).
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21. Anthony A, Lian Z, Perrard DX, Perrard J, Liu H, Cox AR, Saha P, **Hennighausen L**, Hartig SM, Ballantyne CM, Wu H (2021) Deficiency of Stat1 in CD11c⁺ Cells Alters Adipose Tissue Inflammation and Improves Metabolic Dysfunctions in Mice Fed High-Fat Diet. *Diabetes*, doi: 10.2337/db20-0634 (PMID: 33323395)
22. **Hennighausen L**, Lee HK (2020) Activation of the SARS-CoV-2 receptor Ace2 through JAK/STAT-dependent enhancers during pregnancy. [Cell Reports 32:108199](#) (PMID: 32966801)
23. Lee HK, Smith HE, Liu C, Willi M, **Hennighausen L** (2020) Cytosine base editor 4 but not adenine base editor generates off-target mutations in mouse embryos. [Communications Biology](#) (IF: 6.2)
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27. Lee HK, Willi M, Miller SM, Liu C, Liu DR, **Hennighausen L** (2019) Simultaneous targeting of linked loci in mouse embryos using base editing [Scientific Reports 9:1662](#) (PMID: 30733567)
28. Kollmann S, Grundschober E, Maurer B, Warsch W, Grausenburger R, Edlinger L, Huuhtanen J, Lagger S, **Hennighausen L**, Valent P, Decker T, Strobl B, Mueller M, Mustjoki S, Hoelbl-Kovacic A, Sexl V. (2019) Twins with different personalities: STAT5B-but not STAT5A- has a key role in BCR/ABL-induced leukemia. [Leukemia](#).
29. Willi M, Smith HE, Wang C, Liu C, **Hennighausen L** (2018) Mutation frequency is not increased in CRISPR-Cas9-edited mice. [Nature Methods](#) (IF: 47) ([United Nations Policy Source](#)).
30. Lee HK, Willi M, Miller SM, Kim S, Liu C, Liu DR, **Hennighausen L** (2018) Targeting fidelity of adenine and cytosine base editors in mice. [Nature Communications 9:4804](#)

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34. Yoo KH, **Hennighausen** L, Shin HY (2018) Dissecting tissue-specific super-enhancers by integrating genome-wide analyses and CRISPR/Cas9 genome editing. [J Mammary Gland Biol Neoplasia](#) doi: 10.1007/s10911-018-941
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37. Shin HY, Wang C, Lee HK, Yoo KH, Zeng X, Kuhns T, Yang CM, Mohr T, Liu C, **Hennighausen** L (2017) CRISPR/Cas9 targeting events cause complex deletions and insertions at 17 sites in the mouse genome. [Nature Communications 8:15464](#)
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66. Feuermann Y, Kang K, Shamy A, Robinson GW, **Hennighausen L** (2014) MiR-21 is under control of STAT5 but is dispensable for mammary development and lactation. *PLoS One* 9: e85123
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