

Thorold W. Theunissen, PhD

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Contact Information

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Present Position

12/2017-Present	Member, Center of Regenerative Medicine, Washington University in St. Louis
09/2022-Present	Member, Center for Women's Health Engineering, Washington University in St. Louis
10/2023-Present	Associate Professor of Developmental Biology, Washington University School of Medicine in St. Louis
12/2023-Present	Co-Director, Human Cells, Tissues, and Organoids (hCTO) Core, Washington University School of Medicine in St. Louis

Education

Undergraduate

09/2003-07/2007	Bachelor of Arts, <i>Summa cum laude</i> Harvard University, Cambridge, MA (Biology)
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Graduate

08/2007-08/2008	Master of Philosophy University of Cambridge, Cambridge, UK (Developmental Biology)
09/2008-12/2011	Doctor of Philosophy University of Cambridge, Cambridge, UK (Biochemistry) Thesis title: <i>Mechanisms of induced pluripotency: role of the homeodomain transcription factor Nanog</i> Advisor: José Silva, Ph.D.

Post-graduate training

01/2012-11/2017	Sir Henry Wellcome Postdoctoral Fellow Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology
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Technology, Cambridge, MA, USA
Advisor: Rudolf Jaenisch, M.D.

Academic and Promotion History

12/2017-10/2023	Assistant Professor of Developmental Biology
11/2023-Present	Associate Professor of Developmental Biology with Tenure

Honors and Awards

2006	John Harvard Scholarship (top 5% GPA)
2007	Phi Beta Kappa, Harvard University
2008	Cambridge Philosophical Society
2012	Sir Henry Wellcome Postdoctoral Fellowship
2019	Shipley Program for Innovation in Stem Cell Science Award
2019	Edward Mallinckrodt, Jr New Investigator Award
2019	NIH Director's New Innovator Award (DP2)
2024	NIH Outstanding Investigator Award (R35)
2024	Edward Mallinckrodt, Jr Scholar Award

Editorial and Review Responsibilities

Editorial Positions

2022-Present	Early Career Editorial Board, <i>Stem Cell Reports</i>
2023-Present	Advisory Board, <i>Cell Stem Cell</i>

Ad Hoc Manuscript Reviews

BMC Biology (2024), *Cell* (2024-2025), *Cell Reports* (2019, 2022, 2023, 2024), *Cell Stem Cell* (2017-2025), *Current Opinion in Genetics and Development* (2023), *Development* (2018-2025), *Developmental Biology* (2020, 2023), *Developmental Cell* (2021, 2022, 2026), *Developmental Dynamics* (2024), *eLIFE* (2020, 2021), *EMBO Reports* (2022), *Experimental Cell Research* (2019, 2020), *iScience* (2024), *Nature* (2017, 2022, 2023, 2024, 2025), *Nature Biotechnology* (2017), *Nature Cell Biology* (2020, 2021, 2023), *Nature Communications* (2020-2024), *Nature Methods* (2020, 2022), *Nature Reviews Molecular Cell Biology* (2024-2025), *Placenta* (2024), *PNAS* (2020-2025), *Protein & Cell* (2019), *Science* (2024), *Science Advances* (2018, 2019, 2020, 2023, 2025), *Stem Cell Reports* (2019-2025), *Trends in Biotechnology* (2024)

NIH Review Panels

06/2023	Adhoc Member, NICHD Special Emphasis Panel ZHD1 DSR-A (50) 1 “Physiomimetics and Organoids for Reproductive Health”
02/2025	Adhoc Member, Cellular, Molecular, and Integrative Reproduction (CMIR) Study Section
06/2025	Adhoc Member, Complement-ARIE New Approach Methodologies (NAMs)

01/2026 Technology Development Centers (UM1) RFA Panel
Adhoc Member, Cellular, Molecular, and Integrative Reproduction (CMIR) Study
Section

Extramural Grant Reviews

2019	Wellcome Trust (UK)
2019	Medical Research Council (UK)
2020	Agence Nationale de la Recherche (France)
2021	Israel Science Foundation (Israel)
2021	Medical Research Council (UK)
2022	Fondo italiano per la Scienza (Italy)
2022	Wellcome Trust (UK)
2023	Fondation pour la Recherche Médicale (France)
2023	Medical Research Council (UK)
2023	Biotechnology and Biological Sciences Research Council (UK)
2023	Auckland Medical Research Foundation (New Zealand)
2023	Österreichischer Wissenschaftsfonds (Austria)
2024	Governance of Stem Cell-Based Embryo Models Code of Practice (UK)
2024	UK Research and Innovation (UK)
2025	Lalor Foundation (USA)
2025	Israel Science Foundation (Israel)
2025	UK Research and Innovation (UK)
2025	Katholieke Universiteit Leuven (Belgium)
2025	Austrian Academy of Sciences (Austria)

Community Service Contributions

Washington University in St. Louis School of Medicine Committees and Administrative Service:

2019-2020	Faculty Search Committee, Department of Developmental Biology
2019-2022	Faculty Search Committee, Center for Reproductive Health Sciences
2019-Present	Steering Committee, Developmental, Regenerative, and Stem Cell Biology PhD Program
2019-2025	Graduate Admission Committee B
2020-Present	Advisory Board, Researcher Compass
2022-Present	Viktor Hamburger Lecture Selection Committee
2022-Present	Program Development Committee, Master of Science in Reproductive Sciences
2025-Present	Faculty Search Committee, Department of Developmental Biology

Department of Developmental Biology Seminar Series

I have hosted the following speakers in the DB seminar series at Washington University:

2017-2018	Kevin Wang (Stanford), Jianlong Wang (Columbia)
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2018-2019	Stuart Orkin (Harvard), Kathrin Plath (UCLA)
2019-2020	Cigall Kadoch (Harvard), Amander Clark (UCLA)
2020-2021	Jun Wu (UT Southwestern), Marisa Bartolomei (UPenn)
2021-2022	Josien van Wolfswinkel (Yale), Jianping Fu (Michigan)
2022-2023	Justin Brumbaugh (Colorado), Bruno Di Stefano (Baylor)
2024-2025	Berna Sozen (Yale), Jan Zylicz (Copenhagen)
2025-2026	Sophie Petropoulos (Montreal)

Service to Other Universities (External Thesis Examiner):

2022	University of Cambridge	Kate Maskalenka (Rugg-Gunn)
2023	Monash University	Jia Ping Tan (Polo)

Membership in Professional Societies:

2012-Present	International Society for Stem Cell Research (ISSCR)
2021-Present	Society for the Study of Reproduction (SSR)
2022-Present	Society for Developmental Biology (SDB)
2023-Present	Society for Reproductive Investigation (SRI)

Service in Professional Societies:

2019-Present	Abstract Reviewer	ISSCR
2019	Abstract Reviewer	Society for Developmental Biology
2020-Present	Abstract Reviewer	Society for the Study of Reproduction
2020	Session Chair	SDB Annual Meeting, Boston, MA
2022	Session Co-Chair	ISSCR Annual Meeting, San Francisco, CA
2023-2024	Public Affairs Committee	Society for the Study of Reproduction

Consulting Relationships and Board Memberships

2023-Present	Stately Bio, Inc., Palo Alto, CA
2025-Present	e184, Inc., Portland, OR

Teaching

Major External Invited Presentations, including Professorships and Lectures

2014	International Society for Stem Cell Research, Vancouver, Canada
2016	International Society for Stem Cell Research, San Francisco, CA
2019	Society for the Study of Reproduction, San Jose, CA
2019	University of Missouri, Columbia, MO
2020	Gibco Global Stem Cells Event (Virtual)
2021	University of Connecticut, Hartford, CT (Virtual)
2021	Vanderbilt University, Nashville, TN (Virtual)
2021	Gilbert S. Greenwald Symposium, Kansas City, KS (Virtual)

2021 Yale University, New Haven, CT (Virtual)
 2022 Sanford Consortium for Regenerative Medicine, San Diego, CA
 2022 American Society for Reproductive Immunology, Nashville, TN
 2022 International Society for Stem Cell Research, San Francisco, CA
 2022 Saint Louis University, St. Louis, MO
 2022 Baylor College of Medicine, Houston, TX
 2022 University of Colorado Boulder, CO
 2023 UT Southwestern Medical Center, Dallas, TX
 2023 Society for Reproductive Investigation, Brisbane, Australia
 2023 University of Georgia, Athens, GA
 2024 Keystone Symposium on Stem Cell Models for Embryology, Pacific Grove, CA
 2024 Oslo Placenta-Brain Seminar, Oslo, Norway
 2024 Centre for Trophoblast Research, Cambridge, UK
 2024 Cell Symposia: Engineering Development and Disease in Organoids, San Diego, CA
 2024 UCLA Broad Stem Cell Research Center, Los Angeles, CA
 2024 Tsinghua University, Beijing, China
 2024 Symposia on Frontiers in Reproductive Biology, Beijing, China
 2025 McGill University, Montreal, Canada
 2025 Centre de recherche Azrieli, CHU Sainte-Justine, Montreal, Canada
 2025 Vanderbilt University, Nashville, TN (Virtual)
 2025 University of Kansas Medical Center, Kansas City, KS
 2025 Workshop on the 14-Day Limit for Human Embryo Research, San Francisco, CA
 2025 American Society for Reproductive Immunology, St. Paul, MN
 2025 Cold Spring Harbor Asia Meeting on Human Development, Suzhou, China (Virtual)

Washington University Presentations & Lectures:

2019 Center for Reproductive Health Sciences
 2019 Department of Genetics
 2019 Department of Developmental Biology
 2019 Center for Cardiovascular Research
 2020 Genome Engineering & iPSC Center
 2020 Hope Center NeuroRestorative Therapy Group
 2021 Pulmonary Research Conference
 2022 Department of Ophthalmology
 2023 15 Years of WUSM Developmental Biology Symposium
 2025 Endocrinology, Metabolism, Obesity, and Diabetes Seminar Series

Courses

2019-Present	Instructor	BIOL 324 Human Genetics
2019-Present	Instructor	BIOL 5352 Developmental Biology (Spring)
2019-Present	Co-Director	BIOL 5152 RAD Journal Club (Fall & Spring)
2022-Present	Co-Director	BIOL 5352 Developmental Biology (Spring)
2024-Present	Instructor	BIOL 4073 Human Reproductive Physiology (Fall)

Curriculum Development

2024-2025 Curriculum Executive Team

Mentorship & Sponsorship Record

Served as **faculty research mentor** for:

High School Students

Current position (for lab alumni):

2024-2025 Georgia Bland Undergraduate, UT Austin

Summer Students

2025 Chaoyi Cheng Undergraduate, Peking University
2025 Jinyu Liu Undergraduate, University of Oxford

Undergraduates

2020-2023 Eshan Sane MD Candidate, WashU Medicine

Graduate Students

2018-2022 Chen Dong (DRSCB) Consultant, Boston Consulting Group
2018-2024 Laura A. Fischer (DRSCB) Director, hCTO Core, WashU Medicine
2022-2024 Joey Zemke (DRSCB) PhD Candidate, WashU Medicine
2023-Present Kyoung-mi Park (DRSCB)
2023-Present Richard Yin (DRSCB)
2024-Present Serene Mattis (BME)
2024-Present Peiheng Liu (MCB)

Postbaccalaureates

2024-Present Rosa Loewenstein

Postdoctoral Trainees

2019-2023 Shafqat A. Khan, PhD Staff Scientist, WashU Medicine
2020-2024 Rowan M. Karvas, PhD Assistant Professor, Univ. of Colorado
2024-Present Xiangyu Kong, PhD
2026-Present Regan L. Scott, PhD

Research Technicians

2018-2022 Kyoung-mi Park PhD Candidate, Washington University

2020-2022	Brian Chew	PhD Candidate, University of Pittsburgh
2022-Present	Brittany Meyer	

Staff Scientists

2023-Present	Shafqat A. Khan, PhD
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Served on **qualifying examinations** for:

2019	DRSCB	Sadie VanHorn (Morris)
2020	DRSCB	Jennysue Kasiah (McNeill)
2021	DRSCB	Marlie Maestas (Millman)
2022	DRSCB	Mini Yuan (Yoo)
2024	DRSCB	Yoon Lee (Yoo)
2024	DRSCB	Ariel Telger (Greer)
2024	DRSCB	Zack Skovgaard (Meers)
2025	DRSCB	Jenny Snak (Yi)

Served on **thesis committees** for:

2020-2021	DRSCB	Leonardo Velazco-Cruz (Millman)
2020-2023	DRSCB	Keenan Bates (Herzog)
2020-2024	DRSCB	Matthew Mosley (Pincus/Kornfeld)
2021	DRSCB	Sarah Waye (Morris)
2021-2024	DRSCB	Sadie VanHorn (Morris)
2022-Present	DRSCB	Mini Yuan (Yoo)
2024-Present	DRSCB	Zack Skovgaard (Meers)
2021-2024	MCB	Jason Colasanti (Apte)
2022-2024	MCB	Noah DeGeorgia (Kaufman)
2022-2023	MGG	Kitra Cates (Yoo)
2023-Present	MGG	Jessica Harrison (Wang)
2023-Present	MGG	Kaci Martin (Frolova)
2023-Present	CSB	Douglas Abrams (Morris)
2024-Present	BME	Martina Marras (Silva)
2024-Present	BME	Erica Marquez (Silva)

Mentorship Training:

2019	Maximizing Research Mentoring Relationships Workshop
2024	Optimizing the Practice of Mentoring, University of Minnesota
2024	Compass Training and Mentoring Program

Media Activities

2004	<i>The Harvard Crimson</i>
2017	<i>Cambridge Stem Cell News</i>

2018 *Axios*
 2019 *Cell Stem Cell*
 2020 *Washington University Medicine News*
 2021 *Science Magazine*
 2022 *Cell Stem Cell*
 2023 *The Stem Cell Podcast*
 2025 *The Stem Cell Report*
 2025 *Science Magazine*

Research

Present Extramural Grants:

NIH/NIGMS R35GM153439-01	Theunissen (PI)	2024-2029
Resolving epigenetic instability during pluripotent state transitions: a roadmap for exploiting the biomedical potential of dynamic human stem cell states		
NIH/NICHD R01HD119277-01	Theunissen, Dietmann, Kroll, Soncin (MPI)	2025-2030
Modeling human trophoblast differentiation and function using pluripotent stem cells		
NIH/NICHD R21HD112754-01	Theunissen (PI)	2023-2025
Mechanisms of X chromosome inactivation during human trophoblast differentiation <i>in vitro</i>		
Mallinckrodt Scholar Award	Theunissen (PI)	2024-2028
A stem-cell-based model system of human embryo implantation and its pathologies		

Past Extramural Grants:

NIH/NIGMS DP2 GM137418	Theunissen (PI)	2019-2024
Resolving epigenetic instability during pluripotent state transitions: a roadmap for exploiting the biomedical potential of dynamic human stem cell states		
Shipley Foundation	Theunissen (PI)	2019-2024
Generation of synthetic embryo models from human stem cells		
Mallinckrodt Foundation	Theunissen (PI)	2019-2022
Generation of synthetic embryo models from human stem cells		
Children's Discovery Institute	Theunissen, Solnica-Krezel, Kroll (MPI)	2019-2023
Establishing novel stem cell platforms to model developmental disorders in children		

Entrepreneurship/Patents:

1. **Theunissen, T.W.**, Gray, N., and R. Jaenisch. Uses of kinase inhibitors for inducing and maintaining pluripotency (2024). US Patent 12,123,019.
2. **Theunissen, T.W.**, Khan, S.A., and R. Jaenisch. Enhanced methods for inducing and maintaining naïve human pluripotent stem cells (2025). US Patent 12,371,667.
3. Karvas, R.M. and **T.W. Theunissen**. Derivation of trophoblast organoids from naïve human pluripotent stem cells. US Patent App. 18/312,488.
4. Karvas, R.M. and **T.W. Theunissen**. Methods and systems for extended culture of human blastoids to post-implantation stages on 3D matrices. US Patent App. 18/600,769
5. Fischer, L.A. and **T.W. Theunissen**. Methods for tracking and mitigating imprint erasure in human pluripotent stem cells (2025). Washington University in St. Louis (021252/US).

Bibliography: *senior author abstracts and papers are indicated with an asterisk (*)*

A. Original, peer-reviewed articles in refereed journals:

1. Wang, J., Rao, S., Chu, J., Shen, X., Levasseur, D.N., **Theunissen, T.W.**, and S.H. Orkin (2006). A protein interaction network for pluripotency of embryonic stem cells. *Nature* 444, 364-368.
2. Wang, J., **Theunissen, T.W.**, and S.H. Orkin (2007). Site-directed, virus-free and inducible RNAi in embryonic stem cells. *Proceedings of the National Academy of Sciences of the U.S.A.* 104, 20850-5.
3. Silva, J., Barrandon, O., Nichols, J., Kawaguchi, J., **Theunissen, T.W.**, and A. Smith (2008). Promotion of reprogramming to ground state pluripotency by signal inhibition. *PLoS Biology* 6(10), e253.
4. Silva, J., Nichols, J., **Theunissen, T.W.**, Guo, G., van Oosten, A., Barrandon, O., Wray, J., Yamanaka, S., Chambers, I., and A. Smith (2009). Nanog is the gateway to the pluripotent ground state. *Cell* 138(4), 722-737.
5. Tee, W.W., Pardo, M., **Theunissen, T.W.**, Yu, L., Choudhary, J.S., Hajkova, P., and M.A. Surani (2010). Prmt5 is essential for early mouse development and acts in the cytoplasm to maintain ES cell pluripotency, *Genes & Development* 24, 2772-2777.
6. Yang, J., van Oosten, A., **Theunissen, T.W.**, Guo, G., Silva, J.C.R., and A. Smith (2010). STAT3 activation is limiting for reprogramming to ground state pluripotency. *Cell Stem Cell* 7, 319-328.
7. **Theunissen, T.W.**, van Oosten, A., Castelo-Branco, G., Hall, J. Smith, A., and J.C.R. Silva (2011). Nanog overcomes reprogramming barriers and induces pluripotency in minimal conditions, *Current Biology* 21, 65-71.
8. **Theunissen, T.W.**, Costa, Y., Radzisheuskaya, A., van Oosten, A.L., Lavial, F., Pain, B., Castro, L.F.C., and J.C.R. Silva (2011). Reprogramming capacity of Nanog is functionally conserved in vertebrates and resides in a unique homeodomain. *Development* 138, 4853-4865.
9. Costa, Y.*, Ding, J.*, **Theunissen, T.W.***, Faiola, F.*, Hore, T.A., Shliaha, P.V., Fidalgo, M., Saunders, A., Lawrence, M., Dietmann, S., Das, S., Levasseur, D.N., Li, Z., Xu, M., Reik, W., Silva, J.C.R. and J. Wang (2013). NANOG-dependent function of TET1 and TET2 in establishment of pluripotency, *Nature* 495, 370-374. *Co-first author.

10. Radzisheuskaya, A., Chia Gle, B., dos Santos, R.L., **Theunissen, T.W.**, Castro, L.F., Nichols, J., and J.C. Silva (2013). A defined Oct4 level governs cell state transitions of pluripotency entry and differentiation into all embryonic lineages. *Nature Cell Biology* 15, 579-590.
11. Cheng, A.W., Wang, H., Yang, H., Shi, L., Katz, Y., **Theunissen T.W.**, Rangarajan, S., Shivalila, C.S., Dadon, D.B., and R. Jaenisch (2013). Multiplexed activation of endogenous genes by CRISPR-on, an RNA-guided transcriptional activator system. *Cell Research* 23, 1163-1171.
12. Przybyla, L., **Theunissen, T.W.**, Jaenisch, R., and J. Voldman (2013). Matrix remodeling maintains ESC self-renewal by activating Stat3, *Stem Cells* 31, 1097-1106.
13. **Theunissen, T.W.***, Powell, B.E.*, Wang, H.*, Mitalipova, M., Faddah, D., Maetzel, D., Ganz, K., Shi, L., Stelzer, Y., Zhang, J., Lungjangwa, T., Imsoonthornruksa, S., Rangajaran, S., Fan, Z.P., Young, R.A., Gray, N., and R. Jaenisch (2014). Systematic identification of culture conditions for induction and maintenance of naive human pluripotency, *Cell Stem Cell* 15, 471–487. *Co-first author.
14. De Los Angeles, A., Ferrari, F., Fujiwara, Y., Mathieu, R., Lee S., ... **Theunissen, T.W.** (Author 11) ... Jaenisch, R., Deng, H., Orkin S.H., Park, P.J., and G.Q. Daley (2015). Failure to replicate the STAP cell phenomenon. *Nature* 525, E6-E9.
15. **Theunissen, T.W.***, Friedli, M.*, He, Y.*, Planet, E., Oneil, R., ... Drotar, J., Lungjangwa, T., Trono, D., Ecker, J.R., and R. Jaenisch (2016). Molecular criteria for defining the naive human pluripotent state. *Cell Stem Cell* 19, 1-14. *Co-first author.
16. Sahakyan, A., Kim, R., Chronis, C., Sabri, S., Bonora, G., **Theunissen, T.W.**, Kuoy, E., Langerman, J., Clark, A.T., Jaenisch, R., and K. Plath (2017). Human naive pluripotent stem cells model X chromosome dampening and X inactivation. *Cell Stem Cell* 20, 87-101.
17. Pontis, J., Planet, E., Offner, S., Turelli, P., Duc, J., Coudray, A., **Theunissen, T.W.**, Jaenisch, R., and D. Trono (2019). Hominid-specific transposable elements and KZFPs facilitate human embryonic genome activation and control transcription in naive human ESCs. *Cell Stem Cell* 24, 724-735.
18. Lawrence, M., **Theunissen, T.W.**, Lombard, P., Adams, D.J., and J.C.R. Silva (2019). ZMYM2 inhibits NANOG-mediated reprogramming. *Wellcome Open Research* 4: 88.
19. *Dong, C., Beltcheva, M., Gontarz, P., Zhang, B., Popli, P., Fischer, L.A., Khan, S.A., Park, K., Yoon, E., Xing, X., Kommagani, R., Wang, T., Solnica-Krezel, L., and **T.W. Theunissen** (2020). Derivation of trophoblast stem cells from naive human pluripotent stem cells. *eLife* 9, e52504.
20. *Khan, S.A., Park, K., Fischer, L.A., Dong, C., Lungjangwa, T., Jimenez, M., Casalena, D., Chew, B., Dietmann, S., Auld, D.S., Jaenisch, R., and **T.W. Theunissen** (2021). Probing the signaling requirements for naive human pluripotency by high-throughput chemical screening. *Cell Reports* 35, 109233.
21. *Huang, X., Park, K., Gontarz, P., Zhang, B., Pan, J., McKenzie, Z., Fischer, L.A., Dong, C., Dietmann, S., Xing, X., Shliaha, P.V., Yang, J., Li, D., Ding, J., Lungjangwa, T., Mitalipova, M., Khan, S.A., Imsoonthornruksa, S., Jensen, N., Wang, T., Kadoch, C., Jaenisch, R., Wang, J., and **T.W. Theunissen** (2021). OCT4 cooperates with distinct ATP-dependent chromatin remodelers in naïve and primed pluripotent states in human. *Nature Communications* 12, 5123.
22. *Karvas R.M., Khan, S.A., Verma, S., Yin, Y., Kulkarni, D., Dong, C., Park, K., Chew,

- B., Sane, E., Fischer, L.A., Kumar, D., Ma, L., Boon, A.C.M., Dietmann, S., Mysorekar, I.U., and **T.W. Theunissen** (2022). Stem-cell-derived trophoblast organoids model human placental development and susceptibility to emerging pathogens. *Cell Stem Cell* 29, 810-825.
23. *Dong, C., Fu, S., Karvas, R.M., Chew, B., Fischer, L.A., Xing, X., Harrison, J., Popli, P., Kommagani, R., Wang, T., Zhang, B., and **T.W. Theunissen** (2022). A genome-wide CRISPR-Cas9 knockout screen identifies essential and growth-restricting genes in human trophoblast stem cells. *Nature Communications* 13, 2548.
 24. *Karvas, R.M., Zemke, J.E., Ali, S.S., Sane, S., Dong, C., Fischer, L.A., Park, K., Upton, E., Wang, F., Park, K., Hao, S., Chew, B., Meyer, B., Zhou, C., Dietmann, S., and **T.W. Theunissen** (2023). 3D-cultured blastoids model human embryogenesis from pre-implantation to early gastrulation stages. *Cell Stem Cell* 30, 1-18.
 25. *Guo, M., Wu, J., Chen, C., Wang, X., Gong, A., Guan, W., Karvas, R.M., Wang, K., Min, M., Wang, Y., **Theunissen, T.W.**, Gao, S., and J.C.R. Silva (2024). Self-renewing human naïve pluripotent stem cells dedifferentiate in 3D culture and form blastoids spontaneously. *Nature Communications* 15, 668.
 26. *Morey, R., Bui, T., Cheung, V.C., Dong, C., Zemke, J.E., Requena, D., Arora, H., Jackson, M.G., Pizzo, D., **Theunissen, T.W.**, and M. Horii (2024). *iScience* 27: 109569.
 27. *Lam, I., Ndayisaba, A., Lewis, A.J., Fu, Y., Sagredo, G.T., ... **Theunissen, T.W.** (Author 27) ... Elledge, S.J., Dettmer, U., Halliday, G.M., Bartels, T., and V. Khurana (2024). Rapid iPSC inclusionopathy models shed light on formation, consequence and molecular subtype of α -synuclein inclusions. *Neuron* 112, 2886-2909.
 28. *Kumar, D., Karvas, R.M., Jones, B.R., McColl, E.R., Diveley, E., Jasj, S., Sharma, S., Kelly, J.C., **Theunissen, T.W.**, and I.U. Mysorekar (2024). SARS-CoV-2 ORF3a protein impairs syncytiotrophoblast maturation, alters ZO-1 localization, and shifts autophagic pathways in trophoblast cells and 3D organoids. *bioRxiv*, doi: <https://doi.org/10.1101/2024.09.25.614931>.
 29. *Fischer, L.A., Meyer, B., Reyes, M., Zemke, J.E., Harrison, J.K., Park, K., Wang, T., Juppner, H., Dietmann, S., and **T.W. Theunissen** (2025). Tracking and mitigating imprint erasure during induction of naïve human pluripotency at single-cell resolution. *Stem Cell Reports*, 20, 102419.
 30. *Yoon, E., Beltcheva, M., Ali, S.S., Fu, S., Yang, A., Dong, C., Zemke, J.E., Karvas, R.M., Chang, C., Fischer, L.A., Gontarz, P., Zhang, B., Dietmann, S., **Theunissen, T.W.**, and L. Solnica-Krezel (2025). *Development* 152 (17): dev204309.
 31. *Biondic, S., Zhao, C., Yin, R., **Theunissen, T.W.**, and S. Petropoulos (2025). Dissecting small noncoding RNA landscapes in mouse preimplantation embryos and human blastoids for modeling early human embryogenesis. *bioRxiv*, doi: <https://doi.org/10.1101/2025.10.07.680944>.

B. Reviews, Chapters, and Editorials:

1. Orkin, S.H., Wang, J., Kim, J., Chu, J., Rao, S., **Theunissen, T.W.**, Shen, X., and D.N. Levasseur (2008). The transcriptional network controlling pluripotency in ES cells. *Cold Spring Harb. Symp. Quant. Biol.* 73, 195-202.
2. **Theunissen, T.W.** and J.C.R. Silva (2011). Switching on pluripotency: a perspective

on the biological requirement of Nanog. *Philos. Trans. R. Soc. Lond., B., Biol. Sci.* 366, 2222-2229.

3. **Theunissen, T.W.** and J.C.R. Silva (2012). Somatic cell reprogramming: role of homeodomain protein Nanog, in *Stem Cells and Cancer Stem Cells: Therapeutic Applications in Disease and Injury*. Edited by M.A. Hyat. Springer, New York, NY.
4. **Theunissen, T.W.** and R. Jaenisch (2014). Molecular control of induced pluripotency. *Cell Stem Cell* 14, 720-734.
5. **Theunissen, T.W.** and R. Jaenisch (2017). Mechanisms of gene regulation in human embryos and pluripotent stem cells. *Development* 144: 4496-4509.
6. *Dong, C., Fischer, L.A. and **T.W. Theunissen** (2019). Recent insights into the naïve state of human pluripotency and its applications. *Exp. Cell Res.* 385, 111645.
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D. Commentaries on our Research:

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