

# Stanford

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## Dorien Feyaerts

Postdoctoral Scholar, Anesthesiology, Perioperative and Pain Medicine

### Bio

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#### INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

#### HONORS AND AWARDS

- SRI/Bayer Discovery/Innovation grant, Society for Reproductive Investigation (July 2023 - July 2024)
- Best poster for Clinical Science, Stanford Department of Anesthesia (June 2022)
- Postdoctoral Support Grant, Stanford Maternal and Child Health Research Institute (March 2021 - June 2023)

#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, RadboudUniversityNijmegen (2020)
- Master of Science, Katholieke Universiteit Leuven (2012)
- Bachelor of Science, Katholieke Universiteit Leuven (2010)

#### STANFORD ADVISORS

- Brice Gaudilliere, Postdoctoral Research Mentor
- Brice Gaudilliere, Postdoctoral Faculty Sponsor

#### LINKS

- Gaudilliere lab: <https://gaudillierelab.stanford.edu>

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Biomedical scientist and immunologist with a strong background in fetal-maternal immunology that aims to conduct impactful translational research in women's health to improve the health of mothers and their children.

### Publications

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#### PUBLICATIONS

- **Uterine Natural Killer Cells Modulate Endometrial Growth and Persistence in Endometriosis**  
Diop, M., Feyaerts, D., Irwin, J., Einhaus, J., Stelzer, I., Bonham, A., Casillas, A., Vo, K., Blish, C., Giudice, L., Gaudilliere, B.  
ELSEVIER IRELAND LTD.2023: 25
- **Longitudinal clinical phenotyping of post COVID condition in Mexican adults recovering from severe COVID-19: a prospective cohort study.** *Frontiers in medicine*

Núñez, I., Gillard, J., Fragoso-Saavedra, S., Feyaerts, D., Islas-Weinstein, L., Gallegos-Guzmán, A. A., Valente-García, U., Meyerowitz, J., Kelly, J. D., Chen, H., Ganio, E., Benkendorff, A., Flores-Gouyonnet, et al

2023; 10: 1236702

- **Expanded vacuum-stable gels for multiplexed high-resolution spatial histopathology.** *Nature communications*  
Bai, Y., Zhu, B., Oliveria, J., Cannon, B. J., Feyaerts, D., Bosse, M., Vijayaragavan, K., Greenwald, N. F., Phillips, D., Schurch, C. M., Naik, S. M., Ganio, E. A., Gaudilliere, et al  
2023; 14 (1): 4013
- **STABL Enables Reliable and Selective biomarker Discovery in Predictive Modeling of High Dimensional Omics Data**  
Verdonk, F., Hedou, J., Maric, I., Bellan, G., Einhaus, J., Gaudilliere, D., Ladant, F., Stelzer, I., Feyaerts, D., Tsai, A., Bonham, A., Angst, M., Aghaeepour, et al  
LIPPINCOTT WILLIAMS & WILKINS.2023: 814-821
- **Integrated Mass Cytometry Accurately Predicts Hemorrhagic Transformation Following Acute Ischaemic Stroke**  
Tsai, A., Hedou, J., Einhaus, J., Feyaerts, D., Verdonk, F., Choisy, B., Desilles, J., Ho-Tin-Noe, B., Olivot, J., Mazighi, M., Gaudilliere, B.  
LIPPINCOTT WILLIAMS & WILKINS.2023: 261-262
- **An immune signature of postoperative cognitive dysfunction (POCD), a prospective cohort study**  
Verdonk, F., Hedou, J., Bellan, G., Ganio, E., Stelzer, I., Feyaerts, D., Sato, M., Bonham, A., Ando, K., Gaudilliere, D., Gaillard, R., Molliex, S., Sharshar, et al  
LIPPINCOTT WILLIAMS & WILKINS.2023: 466-467
- **Large-scale correlation network construction for unraveling the coordination of complex biological systems** *NATURE COMPUTATIONAL SCIENCE*  
Becker, M., Nassar, H., Espinosa, C., Stelzer, I. A., Feyaerts, D., Berson, E., Bidoki, N. H., Chang, A. L., Saarunya, G., Culos, A., De Francesco, D., Fallahzadeh, R., Liu, et al  
2023
- **Stabl: sparse and reliable biomarker discovery in predictive modeling of high-dimensional omic data.** *Research square*  
Hédou, J., Mari#, I., Bellan, G., Einhaus, J., Gaudillière, D. K., Ladant, F. X., Verdonk, F., Stelzer, I. A., Feyaerts, D., Tsai, A. S., Ganio, E. A., Sabayev, M., Gillard, et al  
2023
- **Towards multiomic analysis of oral mucosal pathologies.** *Seminars in immunopathology*  
Einhaus, J., Han, X., Feyaerts, D., Sunwoo, J., Gaudilliere, B., Ahmad, S. H., Aghaeepour, N., Bruckman, K., Ojcius, D., Schurch, C. M., Gaudilliere, D. K.  
2023
- **Early prediction and longitudinal modeling of preeclampsia from multiomics.** *Patterns (New York, N.Y.)*  
Maric, I., Contrepois, K., Moufarrej, M. N., Stelzer, I. A., Feyaerts, D., Han, X., Tang, A., Stanley, N., Wong, R. J., Traber, G. M., Ellenberger, M., Chang, A. L., Fallahzadeh, et al  
2022; 3 (12): 100655
- **Upcoming and urgent challenges in critical care research based on COVID-19 pandemic experience.** *Anaesthesia, critical care & pain medicine*  
Verdonk, F., Feyaerts, D., Badenes, R., Bastarache, J. A., Bougle, A., Ely, W., Gaudilliere, B., Howard, C., Kotfis, K., Lautrette, A., Le Dorze, M., Mankidy, B. J., Matthey, et al  
2022: 101121
- **Integrated plasma proteomic and single-cell immune signaling network signatures demarcate mild, moderate, and severe COVID-19.** *Cell reports. Medicine*  
Feyaerts, D., Hédou, J., Gillard, J., Chen, H., Tsai, E. S., Peterson, L. S., Ando, K., Manohar, M., Do, E., Dhondalay, G. K., Fitzpatrick, J., Artandi, M., Chang, et al  
2022: 100680
- **Establishment of tissue-resident immune populations in the fetus.** *Seminars in immunopathology*  
Feyaerts, D., Urbschat, C., Stelzer, I. A.  
2022
- **An immune signature of postoperative cognitive dysfunction (POCD)**  
Verdonk, F., Tsai, A. S., Hedou, J., Heifets, B. D., Gaudilliere, D., Bellan, G., Sharshar, T., Gaillard, R., Molliex, S., Feyaerts, D., Stelzer, I., Ganio, E. A., Sato, et al  
LIPPINCOTT WILLIAMS & WILKINS.2022: 577-578
- **Revealing the impact of lifestyle stressors on the risk of adverse pregnancy outcomes with multitask machine learning.** *Frontiers in pediatrics*

- Becker, M., Dai, J., Chang, A. L., Feyaerts, D., Stelzer, I. A., Zhang, M., Berson, E., Saarunya, G., De Francesco, D., Espinosa, C., Kim, Y., Maric, I., Mataraso, et al  
2022; 10: 933266
- **Integrated Single-Cell and Plasma Proteomic Modeling to Predict Surgical Site Complications: A Prospective Cohort Study.** *Annals of surgery*  
Rumer, K. K., Hedou, J., Tsai, A., Einhaus, J., Verdonk, F., Stanley, N., Choisy, B., Ganio, E., Bonham, A., Jacobsen, D., Warrington, B., Gao, X., Tingle, et al  
1800
  - **Integrated trajectories of the maternal metabolome, proteome, and immunome predict labor onset.** *Science translational medicine*  
Stelzer, I. A., Ghaemi, M. S., Han, X., Ando, K., Hedou, J. J., Feyaerts, D., Peterson, L. S., Rumer, K. K., Tsai, E. S., Ganio, E. A., Gaudilliere, D. K., Tsai, A. S., Choisy, et al  
2021; 13 (592)
  - **A Peripheral Immune Signature of Labor Induction.** *Frontiers in immunology*  
Ando, K., Hédou, J. J., Feyaerts, D., Han, X., Ganio, E. A., Tsai, E. S., Peterson, L. S., Verdonk, F., Tsai, A. S., Mari#, I., Wong, R. J., Angst, M. S., Aghaeepour, et al  
2021; 12: 725989
  - **Single-Cell Analysis of the Neonatal Immune System Across the Gestational Age Continuum.** *Frontiers in immunology*  
Peterson, L. S., Hedou, J., Ganio, E. A., Stelzer, I. A., Feyaerts, D., Harbert, E., Adusumelli, Y., Ando, K., Tsai, E. S., Tsai, A. S., Han, X., Ringle, M., Houghteling, et al  
2021; 12: 714090
  - **A pregnancy to remember: trained immunity of the uterine mucosae.** *Mucosal immunology*  
Feyaerts, D., Joosten, I., van der Molen, R. G.  
2020
  - **Clusters of Tolerogenic B Cells Feature in the Dynamic Immunological Landscape of the Pregnant Uterus** *CELL REPORTS*  
Benner, M., Feyaerts, D., Garcia, C., Inci, N., Lopez, S., Fasse, E., Shadmanfar, W., van der Heijden, O. H., Gorris, M. J., Joosten, I., Ferwerda, G., van der Molen, R. G.  
2020; 32 (13): 108204
  - **VoPo leverages cellular heterogeneity for predictive modeling of single-cell data.** *Nature communications*  
Stanley, N. n., Stelzer, I. A., Tsai, A. S., Fallahzadeh, R. n., Ganio, E. n., Becker, M. n., Phongpreecha, T. n., Nassar, H. n., Ghaemi, S. n., Maric, I. n., Culos, A. n., Chang, A. L., Xenochristou, et al  
2020; 11 (1): 3738
  - **Selective expansion and CMV-dependency in pregnancy trained human endometrial NK cells.** *Cellular & molecular immunology*  
Feyaerts, D., van der Meer, A., Joosten, I., van der Molen, R. G.  
2019; 16 (4): 410-411
  - **Respiratory Syncytial Virus Infects Primary Neonatal and Adult Natural Killer Cells and Affects Their Antiviral Effector Function.** *The Journal of infectious diseases*  
van Erp, E. A., Feyaerts, D., Duijst, M., Mulder, H. L., Wicht, O., Luytjes, W., Ferwerda, G., van Kasteren, P. B.  
2019; 219 (5): 723-733
  - **Placental disposition of the immunosuppressive drug tacrolimus in renal transplant recipients and in ex vivo perfused placental tissue.** *European journal of pharmaceutical sciences : official journal of the European Federation for Pharmaceutical Sciences*  
Freriksen, J. J., Feyaerts, D., van den Broek, P. H., van der Heijden, O. W., van Drongelen, J., van Hamersvelt, H. W., Russel, F. G., van der Molen, R. G., Greupink, R.  
2018; 119: 244-248
  - **Endometrial natural killer (NK) cells reveal a tissue-specific receptor repertoire.** *Human reproduction (Oxford, England)*  
Feyaerts, D., Kuret, T., van Cranenbroek, B., van der Zeeuw-Hingrez, S., van der Heijden, O. W., van der Meer, A., Joosten, I., van der Molen, R. G.  
2018; 33 (3): 441-451
  - **Human uterine lymphocytes acquire a more experienced and tolerogenic phenotype during pregnancy.** *Scientific reports*  
Feyaerts, D., Benner, M., van Cranenbroek, B., van der Heijden, O. W., Joosten, I., van der Molen, R. G.  
2017; 7 (1): 2884
  - **1,25-Dihydroxyvitamin D3 and its analog TX527 promote a stable regulatory T cell phenotype in T cells from type 1 diabetes patients.** *PloS one*

Van Belle, T. L., Vanherwegen, A. S., Feyaerts, D., De Clercq, P., Verstuyf, A., Korf, H., Gysemans, C., Mathieu, C.

2014; 9 (10): e109194