Stanford

Magdalena Matusiak

Instructor, Pathology

Bio

BIO

I develop new spatial biology tools and use them to understand how macrophages reflect and contribute to tissue pathology. My previous work established the first clinical sample-compatible markers of human macrophage subsets. I have demonstrated that the distinct macrophage populations are spatially segregated in the tissue, reflect different types of immune response, and are predictive of different clinical patient outcomes.

ACADEMIC APPOINTMENTS

- Instructor, Pathology

PROFESSIONAL EDUCATION

- PhD, Ghent University, Belgium , Innate Imunity (2015)
- MSc, Intercollegiate Faculty of Biotechnology, University of Gdańsk and Medical University of Gdańsk, Poland , Biotechnology (2012)
- BSc, Intercollegiate Faculty of Biotechnology, University of Gdańsk and Medical University of Gdańsk, Poland , Biotechnology (2010)

COMMUNITY AND INTERNATIONAL WORK

- Data Carpentry Instructor and helper, Stanford

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research focuses on revealing clinically relevant prognostic markers associated with myeloid cell biology.

Publications

PUBLICATIONS

- **Spatially organized inflammatory myeloid-CD8+ T cell aggregates linked to Merkel-cell Polyomavirus driven Reorganization of the Tumor Microenvironment.** *bioRxiv : the preprint server for biology*
  Haist, M., Matusiak, M., Tan, Y., Zimmer, S., Stege, H., Kempchen, T. N., Mitschke, S., Chu, P., Weidenthaler-Barth, B., Barlow, G. L., Rogall, F., Gonzalez, A. D., Baertsch, et al
  2025

- **TissueViewer: A Web-Based Multiplexed Image Viewer.** *Bioinformatics (Oxford, England)*
  van IJzendoorn, D. G., Matusiak, M., West, R., van de Rijn, M.
  2025

- **Spatially Segregated Macrophage Populations Predict Distinct Outcomes In Colon Cancer.** *Cancer discovery*

Matusiak, M., Hickey, J. W., van IJzendoorn, D. G., Lu, G., Kidzinski, L., Zhu, S., Colburg, D. R., Luca, B., Phillips, D. J., Brubaker, S. W., Charville, G. W., Shen, J., Loh, et al

2024

- **A spatial map of human macrophage niches reveals context-dependent macrophage functions in colon and breast cancer.** *Research square*

  Matusiak, M., Hickey, J. W., Luca, B., Lu, G., Kidziński, L., Zhu, S., Colburg, D. R., Phillips, D. J., Brubaker, S. W., Charville, G. W., Shen, J., Nolan, G. P., Newman, et al

  2023

- **Molecular classification and biomarkers of clinical outcome in breast ductal carcinoma in situ: Analysis of TBCRC 038 and RAHBT cohorts.** *Cancer cell*

  Strand, S. H., Rivero-Gutierrez, B., Houlahan, K. E., Seoane, J. A., King, L. M., Risom, T., Simpson, L. A., Vennam, S., Khan, A., Cisneros, L., Hardman, T., Harmon, B., Couch, et al

  2022

- **Interactions in CSF1-driven Tenosynovial Giant Cell Tumors.** *Clinical cancer research : an official journal of the American Association for Cancer Research*

  van IJzendoorn, D. G., Matusiak, M., Charville, G. W., Spierenburg, G., Varma, S., Colburg, D. R., van de Sande, M. A., van Langevelde, K., Mohler, D. G., Ganjoo, K. N., Bui, N. Q., Avedian, R. S., Bovee, et al

  2022

- **Prognostic relevance of the hexosamine biosynthesis pathway activation in leiomyosarcoma.** *NPJ genomic medicine*

  Tolwani, A., Matusiak, M., Bui, N., Forgo, E., Varma, S., Baratto, L., Iagaru, A., Lazar, A. J., van de Rijn, M., Przybyl, J.

  2021; 6 (1): 30

- **Relationships between highly recurrent tumor suppressor alterations in 489 leiomyosarcomas.** *Cancer*

  Schaefer, I., Lundberg, M. Z., Demicco, E. G., Przybyl, J., Matusiak, M., Chibon, F., Ingram, D. R., Hornick, J. L., Wang, W., Bauer, S., Baker, L. H., Lazar, A. J., van de Rijn, et al

  2021

- **Self-Organizing Maps for Cellular In Silico Staining and Cell Substate Classification.** *Frontiers in immunology*

  Yuan, E., Matusiak, M., Sirinukunwattana, K., Varma, S., Kidziński, Ł., West, R.

  2021; 12: 765923

- **Atlas of clinically distinct cell states and ecosystems across human solid tumors.** *Cell*

  Luca, B. A., Steen, C. B., Matusiak, M., Azizi, A., Varma, S., Zhu, C., Przybyl, J., Espín-Pérez, A., Diehn, M., Alizadeh, A. A., van de Rijn, M., Gentles, A. J., Newman, et al

  2021

- **Immune cell topography predicts response to PD-1 blockade in cutaneous T cell lymphoma.** *Nature communications*

  Phillips, D., Matusiak, M., Gutierrez, B. R., Bhate, S. S., Barlow, G. L., Jiang, S., Demeter, J., Smythe, K. S., Pierce, R. H., Fling, S. P., Ramchurren, N., Cheever, M. A., Goltsev, et al

  2021; 12 (1): 6726

- **Expression of SARS-CoV-2 entry receptors in the respiratory tract of healthy individuals, smokers and asthmatics.** *Respiratory research*

  Matusiak, M., Schurch, C. M.

  2020; 21 (1): 252

- **Cellular neighborhoods predict pembrolizumab response in cutaneous T cell lymphoma**

  Schurch, C. M., Phillips, D. J., Gutierrez, B., Matusiak, M., Bhate, S. S., Barlow, G. L., Fling, S. P., Ramchurren, N., Pierce, R. H., Cheever, M. A., Khodadoust, M. S., West, R., Kim, et al

  AMER ASSOC CANCER RESEARCH.2020

- **Atlas of clinically-distinct cell states and cellular ecosystems across human solid tumors**

  Luca, B. A., Steen, C. B., Azizi, A., Matusiak, M., Przybyl, J., Neishaboori, N., Perez, A., Diehn, M., Alizadeh, A. A., van de Rijn, M., Gentles, A. J., Newman, A. M.

  AMER ASSOC CANCER RESEARCH.2020