Universiteit Leiden
The Netherlands

Gilded scars: decoding how metabolism and cancer cell-intrinsic features shape immunity in hepatocellular carcinoma

Taranto, D.

Citation
Taranto, D. (2026, April 7). *Gilded scars: decoding how metabolism and cancer cell-intrinsic features shape immunity in hepatocellular carcinoma*. Retrieved from https://hdl.handle.net/1887/4300616

Version:	Publisher's Version
License:	Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden
Downloaded from:	https://hdl.handle.net/1887/4300616

Note: To cite this publication please use the final published version (if applicable).

Curriculum vitae

Daniel Silva Taranto de Souza was born on February 27th 1990 in Niteroi, Rio de Janeiro, Brazil. Between 1996 and 2004, he completed his primary education at Colégio Fundamental, and he completed his secondary education in Colégio Voltaire (2005-2007), both in his hometown. Between 2008 and 2013, he attended the Fluminense Federal University in Niteroi, Rio de Janeiro, Brazil, where he graduated in Chemical Engineering. In 2012-2013, he first performed an internship in Safety Engineering at Siemens in Rio de Janeiro, Brazil, working in elaborating safety procedures for Floating Production Storage and Offloading (FPSO) ships. Then, he performed a second internship as a Process Engineer in Radix Engenharia & Software in Rio de Janeiro, Brazil, where he was later hired as a Process Engineer. Between 2014 and 2016 as a Junior Engineer, he worked as a researcher and field engineer to propose and implement an optimization strategy for the water management of 21 thermal power plants across Brazil. As a Senior Engineer in 2014-2016, he oversaw the implementation of techniques to improve the efficiency of heat exchangers and reactors in oil refining plants; he planned the overhauling of a polymer plant alarm system; he worked as a researcher in improving the energy efficiency of 5 thermal power plants; and he optimized the equipment database of a FPSO from Chevron. Following his experience as a Chemical Engineer, Daniel joined the Life Sciences and Technologies Master's degree in Leiden University in 2017. He graduated (Cum Laude) in 2019 after performing his first internship in the group of Sander van Kasteren, where he studied the role of the mannose receptor in cross presentation and inflammatory response by dendritic cells; and after his second internship in the group of Leila Akkari, where he investigated the immune microenvironment in liver cancer, with a particular focus on hepatic macrophages. In this same group, Daniel joined as a PhD student in 2019, resuming his research in the role of immune cells in liver cancer initiation and progression. During his PhD track, his coursework included the OOA courses Basic Oncology, Histopathology of Human Tumours, and Ethics and Integrity in Science. He also attended the Laboratory Animal Science (Amsterdam Medical Center), and the EMBO YIN PhD (Heidelberg, Germany) courses. In addition, he completed programme elements through supervision of Master's students, teaching activities, and participation in conferences and scientific meetings (including ISREC SCCL Symposia 2021/2023; Cell Symposia on myeloid cells 2023; EMBO Workshop "The Many Faces of Cancer Evolution" 2022/2024, and others). The findings of this PhD study are reported in this document.

Publications

Macrophages and T cells in metabolic disorder-associated cancers

Taranto, D., Kloosterman, D., Akkari, L*.

Nature Reviews Cancer 24, 744–767 (Oct 2024). https://doi.org/10.1038/s41568-024-00743-1.

Cancer cell genetics shaping of the tumor microenvironment reveals myeloid cell-centric exploitable vulnerabilities in hepatocellular carcinoma

Ramirez, C.F.A.#, Taranto, D.#, Ando-Kuri, M.#, de Groot, M.H.P., Tsouri, E., Huang, Z., de Groot, D., Kluin, R.J.C., Kloosterman, D.J., Verheij, J., Xu, J., Vegna, S.*, Akkari, L*.

Nature Communications **15**, 2581 (Mar 2024). 10.1038/s41467-024-46835-2

Multiparametric analyses of hepatocellular carcinoma somatic mouse models and their associated tumor microenvironment

Taranto, D., Ramirez, C.F.A., Vegna, S., de Groot, M.H.P., de Wit, N., van Baalen, M., Klarenbeek, S., Akkari, L*.

Current Protocols e147, 1(6) (Jun 2021). https://doi.org/10.1002/cpz1.147

P-stalk ribosomes act as master regulators of cytokine-mediated processes

Dopler, A., Aklan, F., Malka, Y., van der Kammen, R., Hoefakker, K., Taranto, D., Kocabay, N., Mimpen, I., Ramirez, C., Malzer, E., Isaeva, O.I., Kerkhoff, M., Gangaev, A., Silva, J., Ramalho, S., Hoekman, L., Altelaar, M., Beijersbergen, R., Akkari, L., Yewdell, J.W., Kvistborg, P., Faller, W.J*.

Cell Volume 187, Issue 24, 6981 - 6993.e23 (Nov 2024). 10.1016/j.cell.2024.09.039

Fasting boosts breast cancer therapy efficacy via glucocorticoid activation

Padrão, N., Severson, T.M., Gregoricchio, S., Guijarro, A., Lutz, C., Taranto, D., Hutten, S., Ligorio, F., Persia, A., Roest, M., Sanders, J., Song. J., Pires-Oliveira, S., Collier, M.D., Horlings, H., Pisciotta, L., de Braud, F., Vernieri, C., Akkari, L., Jonkers, J., Nencioni, A., Caffa, I.*, Zwart, W*.

Nature (Dec 2025). https://doi.org/10.1038/s41586-025-09869-0

# equal contribution, * corresponding author

Manuscripts in preparation

TREM2 blockade synergizes with immunotherapy to prolong survival in non-fibrotic fatty liver-associated cancer

Taranto, D.#, de Paulis, C.#, Ando-Kuri, M., de Ramirez, C.F.A., Martin, E., Foskolos, T., de Groot, M.H.P., Vegna, S., Akkari, L*.

In preparation.

# equal contribution, * corresponding author

Acknowledgements

This work was only possible thanks to the support of my supervisors, colleagues, friends, and family. What follows are a few words for the people who shaped my career and life during this time.

Mentors:

I'm eternally grateful to my promotor, confidante, supporter, and friend, Leila, for making it possible for me to do this work and become a scientist. It's hard to express in a few words how important you've been (and continue to be) in my life; you've changed me.

Karin; I'm grateful for your insightful guidance, generosity, and support. It's been an honour having you as my promotor.

Heinz, Tassos, Daniela; our yearly discussions were crucial in structuring this work.

Serena; I'm grateful for your supervision and expertise, which were key to these projects' success and instrumental in shaping my career.

NKI:

I was fortunate to work with outstanding colleagues: Allard, Anna, Catrin, Claudia, Daniil, Danique, Hannah, Jelle, Jinne, Kevin, Konstantina, Lorenzo, Martijn, Max, Mercedes, Nuno, Olga, Rachele, Ronak, and many others.

Lab:

I'm very proud to be part of this family. My colleagues became dear friends, and these years together were joyful, rewarding, and unforgettable.

Marnix; your support was crucial in my first years. We had a great time. It was sad to see you leave, but it was for a good reason.

Naz; I remember your interview and telling Leila I believed in you – now you're shining. Thanks for all your support.

Lesley; your humour made everything lighter and funnier.

Luuk; our liver project never took off, but our discussions and laughter in the beach office were precious.

Awa; from office partners to stealthy Tiffany's lunches, we shared secrets, struggles, and funny talks.

Shanna; as the first lab member, you helped build the lab's foundation and supportive culture that made it feel like a family.

Jana; your positivity, sharpness, and hardworking spirit are exceptional. You'll be a great scientist.

Thijs; your resolute and outspoken attitude is impressive. Our short time together brought laughs but also talks that influenced my career.

Menno; my office partner. Your mix of an intelligent, sharp mind and a relaxed mindset is unique. Our discussions were inspiring and scientifically challenging, yet always light and funny.

Nico; my office neighbour. I miss our stock talk, scientific debates, food/exercise discussions, and the funny moments.

Jo; your wit, serenity, presence, and positive energy made the lab a better place. I've gained a friend I deeply admire.

Daan; starting our PhD together was incredible. My partner for intellectual discussions, conference adventures, and many laughs. I'm proud to see you shine.

Efi; your perseverance, resilience, and intelligence are contagious. I cannot wait to see how far you will go, my dear friend.

Masami; working with you was a highlight of my PhD. You transformed our science. I miss our gene list discussions, your creativity, and our easygoing routine.

Christel; we worked together on everything I did as a scientist. We shared the hard work and the difficult moments, but always in good spirits. It was a privilege to have you as my closest colleague and as a friend.

To those I worked with more briefly: Ammarina, Angelina, Apostolos, Bauke, Casper, Eduardo, Jeremy, Jing, Kiona, Lotte, Roos, Sanne, Theo; thank you for being part of it.

Paranymphs:

Claudia; guiding you and watching you grow as a scientist has been amazing. I'm happy that it's you continuing what I started, and I feel privileged to have shared this time with you. I look forward to more years of laughing together.

Martina; my mentee and dear friend, it's difficult to put into words how proud I am of the person and scientist you've become. I always believed in your potential. Seeing you flourish has been my greatest joy. You'll go far, and you know I'll always be around.

Friends:

I'm grateful for the support of my friends: Alvaro, Bruno, Jaque, Jenifer, João, Kazan, Mari, Mau, Vanessa, and many others. Special thanks to Fernando and Francisco, my best friends who became family, who never let me give up.

Family:

Dad; you've been my rock in difficult times and never let me give up on this milestone. Your intelligence, resilience, wisdom, and care have shaped who I am, and I'm honoured to be your son. I love you.

Mom; you're my biggest joy. We laugh, we travel together, and you make everything feel lighter. Your visits during my PhD made living abroad far easier and ensured this was an enjoyable journey. I love you with all my heart.

My husband Tini; no one understands me as you do. I cherish the many years we've shared. You, your mom, and your aunt supported me through this whole journey, and I'm very grateful for that. You're the love of my life; thank you for everything. This PhD is also yours.