GIUSEPPE ROSCILLI, PhD

Chief Technology Officer, Takis Srl
Rome, Italy
Email: roscilli@takisbiotech.it

A. Personal Statement

I am a biologist and translational scientist with over 25 years of experience in drug discovery and development, spanning monoclonal antibodies, gene therapy, small molecules, and advanced immunotherapies. I currently serve as Chief Technology Officer and Director of the Drug Evaluation and Monoclonal Antibody Department at Takis Srl, where I lead proprietary and collaborative programs in oncology and infectious diseases.

A central and longstanding focus of my scientific activity is the ErbB3/HER3 receptor as a driver of tumour progression and therapeutic resistance. Starting from my PhD work and continuing through multiple preclinical and translational programs, I have contributed to the discovery, characterization, and development of anti-HER3 monoclonal antibodies, antibody–drug conjugates, and most recently bispecific T-cell engager antibodies. This expertise culminated in my most recent publication describing novel humanized anti-HER3 antibodies with structural and therapeutic characterization (Antibodies, 2025) and in the filing of international patents on humanized anti-HER3 sequences.

My career includes a long period at IRBM (Merck & Co.), where I played a key role in the discovery of the PARP inhibitor niraparib (MK-4827), now approved for ovarian cancer, followed by the co-founding of Takis, a biotech company active in antibody-based immunotherapy, genetic vaccines, and infectious disease countermeasures. During the COVID-19 pandemic, I contributed to the development of the DNA vaccine COVID-eVax and to neutralizing monoclonal antibodies against SARS-CoV-2, leading to first-in-human clinical trials and multiple high-impact publications.

My current scientific interests focus on next-generation antibody therapeutics, with particular emphasis on HER3-targeted bispecific antibodies and T-cell engagers, aiming to translate robust biological rationale into clinically actionable immunotherapies.

B. Positions, Scientific Appointments and Professional Experience

2022–present
Chief Technology Officer, Takis Srl, Pomezia (Rome), Italy

2011–2022
Director, Drug Evaluation and Monoclonal Antibody Department, Takis Srl, Pomezia (Rome), Italy

2015–present
External Evaluator, EUREKA Network and Innovation Fund Denmark

2010
Researcher, Biogem SCARL, Ariano Irpino (AV), Italy

2007–2009
Research Biologist, Oncology Department, IRBM “P. Angeletti” (Merck & Co.), Pomezia (Rome), Italy

1994–2007
Progressive scientific roles (Laboratory Technician to Staff Biologist), IRBM "P. Angeletti", Pomezia (Rome), Italy

---

C. Education and Training

2015
PhD in Experimental Medicine, Molecular Medicine and Biology Program
Sapienza University of Rome, Italy
Thesis: *Malignant pleural effusions as a model to determine patient chemosensitivity and to explore the role of ErbB3 in drug resistance*

2015
FELASA C Certification, Laboratory Animal Science (EMBL Course)

2012
MSc in Biotechnology, Sapienza University of Rome, Italy

D. Contributions to Science (Selected)

HER3 / ErbB3 biology and antibody therapeutics

My research has significantly contributed to the understanding of HER3 as a key mediator of resistance to targeted therapies and to the development of therapeutic antibodies against this receptor. I have co-authored multiple seminal studies demonstrating the efficacy of anti-HER3 monoclonal antibodies in lung cancer, melanoma, and other solid tumors, including combination strategies to prevent resistance. Recent work includes the generation and structural characterization of novel humanized anti-HER3 antibodies and their therapeutic evaluation, supporting further development as naked antibodies, ADCs, and bispecific T-cell engagers.

Antibody engineering and immunotherapy

At Takis, I lead the design, generation, and preclinical development of monoclonal antibodies, antibody fragments, and bispecific formats for oncology and infectious diseases. This includes supervision of in vitro and in vivo efficacy, safety, and translational studies, as well as technology scouting and strategic project selection.

Drug discovery and translational oncology

During my time at IRBM (Merck), I played a key role in the discovery of the PARP inhibitor niraparib (MK-4827), contributing to assay development and in vivo efficacy studies that supported its clinical development and approval.

E. Key Publications (selected)

- Roscilli G. et al. *Novel Humanized Anti-HER3 Antibodies: Structural Characterization and Therapeutic Activity*. Antibodies, 2025.
- Aurisicchio L. et al. *A first-in-human trial on the safety and immunogenicity of COVID-eVax*. Mol Ther, 2023.

- Ciardiello C. et al. *Synergistic antitumor activity of histone deacetylase inhibitors and anti-ErbB3 antibody in NSCLC primary cultures*. Oncotarget, 2016.
- Fattore L. et al. *Combination of antibodies directed against different ErbB3 surface epitopes prevents resistance to BRAF/MEK inhibitors*. Oncotarget, 2015.
- Jones P. et al. *Discovery of MK-4827 (niraparib), a PARP inhibitor efficacious in BRCA-mutant tumors*. J Med Chem, 2009.

(Full publication list available upon request)

F. Patents (selected)

- Humanised sequence for the generation of anti-ErbB3/HER3 antibodies. IT102024000023688; PCT/IT2025/050253.
- Immunotherapy against ErbB3 receptor. WO2012059224A1.
- Antibodies against SARS-CoV-2 and uses thereof. EP22786846.0; US20240382586.

G. Professional Activities and Memberships

- Regular reviewer for international journals including *Journal of Translational Medicine*, *mAbs*, *Antibodies*, *IJMS*
- Associated Editor of *Journal of Translational Medicine*
- Member of The Antibody Society
- Member of Società Italiana di Cancerologia (SIC)
- Member of SIICA