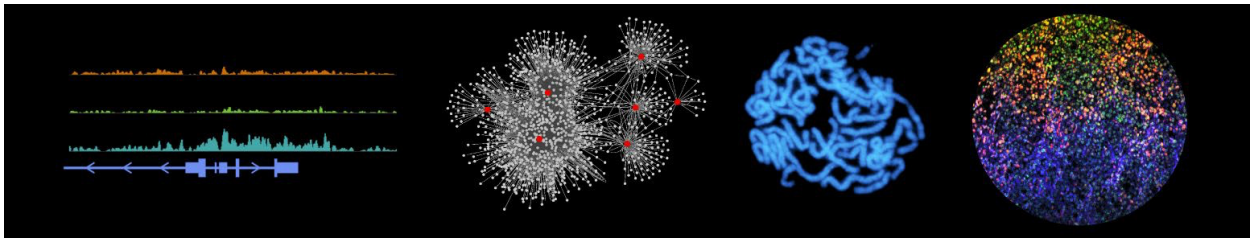

Postdoctoral Scientist
Non-genetic determinants of drug persisters in cancer

We are looking for an enthusiastic postdoctoral scientist with strong expertise in molecular and cellular biology to lead a project aimed at identifying epigenetic determinants of acquired resistance to therapy in cancer. The project is part of a EU-funded collaborative study that involves five high-profile partners across Europe. The study will employ SmartCodes, next-generation molecular barcodes developed by our collaborator Greg Hannon in Cambridge UK, which allow prospective isolation and characterization of therapy-resistant cells from treatment naïve tumors. Depending on candidate's interests, other projects related to the broader research of the lab may also be considered.

The Scaffidi Lab (IEO) investigates non-genetic alterations promoting cancer development, with a particular focus on chromatin-based mechanisms operating in solid cancers. Recent studies by our group have uncovered unexpected disease mechanisms, with direct implications for disease management (Torres et al., *Science* 2016, Loukas et al., *Cancer Cell*, 2023, Monserrat et al. *Nature Cell Biology* 2021, Morales et al. *Nature Communications* 2020). Our research combines genomics, CRISPR-based genetics, microscopy and *in vivo/ex vivo* functional assays to uncover new biology through the study of altered cellular states in cancer, as well as to identify associated vulnerabilities that can be exploited to interfere with the disease.

Key experience and competencies:

Essential

- PhD in molecular and/or cellular biology, biochemistry, or related disciplines.
- Strong expertise in molecular biology (advanced molecular cloning and NGS-based approaches), cell culture (transfection, transduction, clone isolation, medium- or high-throughput cell culturing), basic biochemistry and quantitative microscopy
- Good knowledge and expertise in chromatin biology
- Track record of writing papers as evidenced by publications or submitted manuscripts in peer-reviewed journals, with a least one first-author publication
- Excellent spoken and written English

Desirable

- Experience with CRISPR technology, including targeted genome editing and NGS-based read-outs
- Experience with molecular barcoding/lineage tracing
- Experience with animal work (e.g. transplantation assays and xenograft models)

Duration and salary: The position is initially for 3 years, with possible extensions. A competitive salary will be offered depending on experience and qualifications. Applicants currently living abroad may be eligible for generous tax benefits upon relocation.

The Institute: The European Institute of Oncology (IEO) is one of the leading research institutes in Italy. The Department of Experimental Oncology (DEO) hosts ~250 scientists working in 20 independent research groups, and is equipped with state-of-the-art Technology Units. DEO is located within a scientific campus together with two other partner institutions: the FIRC Institute of Molecular Oncology (IFOM) and the Italian Institute of Technology (IIT). The IEO is one of the 13 members of the EU-LIFE alliance to promote excellence in life sciences in Europe. IEO is an equal opportunity employer committed to excellence through diversity.

Closing date: 30 August 2024. To apply please submit a CV and a letter of interest here.

IEO
Istituto Europeo di Oncologia