

**Phd Program in Molecular Medicine & Medical Biotechnologies
Guest Speakers Lectures & Advanced courses
2026**

Monday, February 2, 14:00 (CEST)

"Microbiota-shaped neutrophil senescence drives sexual dimorphism in cancer"



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Sex disparities are epidemiologically linked to cancer, yet how the sex-specific intrinsic microbiome orchestrates the immune system to affect sex disparities is unclear. We have identified a subpopulation of senescence-like neutrophils that preferentially accumulate in the male tumor microenvironment and exert immunosuppressive function to limit antitumor immunity, thereby predicting poor prognosis for male cancer patients. Differently enriched senescence-like neutrophils are attributed to the intestinal microbiota, which preferentially populates females. The female microbiota-associated metabolites directly target the iron sequestrator Lcn2 in senescence-like neutrophils to induce ferroptosis; thereby eliminating senescence-like neutrophils and promoting antitumor immunity in females. Together these findings identify a microbiota-LCN2 axis that regulates the sexual disparity in cancer

ZOOM Link

<https://us06web.zoom.us/j/81855698364?pwd=KqFPq9oFiuhobk6oXwDqrs5wLfcBJK.1>

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Invited by S. Romano