

Charting the Future of Nanomedicine: Opportunities and Skills for Young Innovators in Europe

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As nanomedicine accelerates its translation from groundbreaking research to practical healthcare solutions, young innovators are at the heart of shaping its future. This keynote will provide a big-picture overview of the current and emerging trends in nanomedicine, including nucleic acid therapies, smart drug delivery systems, radio-enhancers, early and accurate diagnostics through nano-enabled devices, and the recent role of computational nanomedicine, where AI-driven design and modeling are revolutionizing how we develop and apply these technologies. Together, these advancements are setting new benchmarks in addressing unmet clinical needs.

Given the complexity of nanomedicine, specific education, training programs, and community building are critical for establishing Europe's global leadership in the field. We will discuss how the European Technology Platform on Nanomedicine (ETPN) and complementary national initiatives are shaping a supportive ecosystem for emerging talents in the field. The ETPN actions for the last 20 years, including the new and upcoming "ETPN Academy," are designed to empower the best experts in Europe as well as young researchers with the skills, networks, and resources needed to thrive in Nanomedicine.

Finally, we will reflect on the critical question: "What will be the next big thing in nanomedicine?" By examining the intersection of innovation and clinical application, this session aims to equip young innovators with the insights needed to navigate and lead the next wave of breakthroughs in nanomedicine.