IU faculty help set the bar for precision health

Indiana University is investing in talent and technology to cure diseases through its PRECISION HEALTH INITIATIVE.

Two years ago, Indiana University (IU) president Michael McRobbie announced the $120-million IU Precision Health Initiative, a multidisciplinary program to discover and develop cures for multiple myeloma, triple negative breast cancer and pediatric sarcoma, and to delay progression and ultimately prevent Type 2 diabetes and Alzheimer's disease.

Since then, IU has recruited more than 30 new faculty from across the nation and it continues to seek rising stars.

"A major element in the implementation of the Precision Health Initiative has been the recruitment of excellent faculty members whose expertise can expand on the IU School of Medicine's existing strengths," McRobbie said. "We are seeking exceptional faculty who are prepared to lead and who have expertise that will support the success of the Precision Health Initiative, which will position IU among the leading universities in the nation in this emerging aspect of biomedical research."

IU has established several pillars, or scientific areas of focus, in support of the initiative, including genomic medicine; cell, gene and immunotherapies; chemical biology and biotherapeutics; data science and informatics; and regenerative medicine and engineering.

With cancer at the forefront, IU has made significant investments in technology and facilities to ensure that faculty remain at the leading edge of precision research. Scientists and clinicians can sequence a patient's tumor DNA in-house at IU or at one of the five precision genomics clinics throughout the state run by Indiana University Health, the university's partner health care system. IU Health is also the only approved site in Indiana to administer newly approved CAR T-cell therapies in adults. Approval to administer CAR T-cell therapies in children is expected soon at Riley Hospital for Children at IU Health.

IU School of Medicine recently opened its first FDA-approved Good Manufacturing Practice (GMP) cell therapy lab, which allows IU scientists to develop new cell, gene and immunotherapy-based treatments on campus.

Beyond its immunotherapy and genomics capabilities, IU has also boosted its capacity in RNA transcriptomics with a new 10X Genomics unit, which is fast becoming an essential tool for precision health. "DNA is one-dimensional and describes what is in your genetic code," said Tatiana Foroud, PhD, professor of medical and molecular genetics at IU School of Medicine and co-leader of the genomic medicine pillar for the IU Precision Health Initiative. "RNA is multi-dimensional and allows you to understand what is happening at the individual cell level."

WE ARE SEEKING EXCEPTIONAL FACULTY

As medicine and translational research progresses, an extraordinary level of precision will become the rule, not the exception, and the faculty at IU will help set the bar. ■

For more information visit precisionhealth.iu.edu/careers

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IU President Michael A. McRobbie.

IU researcher operates Prodigy device within FDA-approved cell therapy lab.

IU School of Medicine faculty Tatiana Foroud.