

We're entering a new generation of precision medicine

For decades, doctors treated nearly all patients with the same disease in the same way, aware that drugs that worked on some would fail on others. Unlocking the mysteries of genetics has held the promise of finding more customized cures with drugs that can attack genetic mutations or repair genetic defects in individuals.

The emerging approach plays to the strengths of the Massachusetts life-sciences sector, where dozens of drug makers, biotech startups, university labs, and medical centers are active in the field. Such companies as the Swiss drugmaker Novartis AG and the Japanese firm Takeda Oncology Co., which both have major operations in Cambridge, are marketing targeted therapies to treat cancer.

Cambridge biotechs such as Genzyme Corp. and Alnylam Pharmaceuticals Inc. are developing personalized treatments for rare genetic disorders like Gaucher and Fabry disease. Vertex Pharmaceuticals Inc. of Boston is turning out a portfolio of medicines that attack the life-threatening lung disease cystic fibrosis by targeting specific genetic mutations.

If the first genome map was the opening act, "we're into the next generation of precision medicine," said Tyler Jacks, director of MIT's Koch Institute for Integrative Cancer Research in Cambridge.

That next generation is focusing less on a person's overall genetic makeup than on specific genetic mutations that cause disease. In the case of Jacks's lab at the Koch Institute, one focus is on mutations that cause pancreatic, lung, and colon cancers.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [In the future, treatments tailored to patients](#)