# Translational Medicine: From Bench to Bedside and Back to Bench

**Translational medicine** is collaborative bench-to-bedside-to-bench research that aims to further understand disease biology and identify the patient populations most likely to derive benefit from therapy.

**Did you know?** 💡

## Biomarkers & Pharmacodiagnostics

Predictive biomarkers are characteristics within the body that can be used to indicate a patient's response to certain medicines.

Pharmacodiagnostics are diagnostic tests for biomarker expression that may predict patient response prior to treatment.

## Imaging

The imaging team is addressing critical questions of disease biology and drug mechanisms of action spanning drug discovery and development by combining imaging technologies and state-of-the-science response criteria. Imaging is focused on generating insights in areas including target expression, target engagement, dose projection, treatment efficacy, safety and toxicity. Imaging insights inform drug development through patient selection and stratification, and timely readouts for efficient decision-making.

**Did you know?** 💡

## Translational Pathology

Translational pathology utilizes a number of different technologies, such as next generation sequencing, to measure different aspects of biology, generate data and provide a total composite picture of disease biology, which can help inform clinical development programs in cancer research.

**Did you know?** 💡

By integrating information from different disciplines, researchers are able to quickly translate information in the lab, implement new insights in clinical trials and accelerate the pipeline to help identify the right treatments, for the right patients, at the right time.

**Click here** to learn more about our approach to translational medicine.

## Bioinformatics

Translational bioinformatics combines biology, computer science, statistics and engineering to analyze raw data and distill it into useful biological signals, such as looking for specific patterns of mutations and genes that may help design more effective clinical trials or turn biomarkers into clinical diagnostics.

**Did you know?** 💡

## Translational Research

In translational medicine, experimentation and exploratory research is fundamental to form hypotheses that can be tested in the clinic. This research aims to dissect the human pathophysiology of disease to generate insights that inform our clinical approach.

Through translational research, we are able to integrate, analyze and synthesize data derived from both external and internal studies addressing fundamental translational questions to develop actionable insights and hypotheses in clinical development.

**Did you know?** 💡

## Clinical Pharmacology and Pharmacometrics

Clinical pharmacology and pharmacometrics use mechanistic modeling and a deep understanding of biology to improve hypothesis generation and provide better insights on how potential treatments will behave in the body or in combination with other molecules.

**Did you know?** 💡

## Collaboration

We collaborate with our scientific partners to put collective learnings to use.

**Did you know?** 💡

**Bristol-Myers Squibb**