

New Moffitt Cancer Center patent promises to accelerate cancer trials

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A new patent has been issued to Moffitt Cancer Center for a computerized system that efficiently selects the right patient for the right clinical trial. The newly patented system matches the registered patient's own molecular profile – warehoused in a database of thousands of patient-donated biological tissue or tumor samples – to the molecular design of the drug aimed at targeting their disease at the molecular level, and does it quickly. The system promises to accelerate clinical trials and help shorten the time that it takes to get critically needed new drugs into the market.

Getting new drugs to market to fight cancer and other serious diseases requires, on average, 15 years. The drug development process is long and complex, but the three-phase [clinical trials](#) process – estimated to take up to half of those 15 years – is often the bottleneck in getting innovative drugs to the patients who need them.

Clinical trials, increasingly becoming more expensive, are also multifaceted. While patients may qualify for a clinical trial based on their age or stage of disease, they may not be, over the long term of the trial, the best candidates to test a drug. Adverse events, changes in a patient's health status and the potential for a drug not being effective for them slow the process. Although patients may have met the trial protocol's criteria, the drug may not be right for them because their [molecular profile](#) is not a good match for the chemical and molecular properties of the drug.

Because the concept of personalized medicine is selecting the right drug for the right patient, innovations have been needed to bring personalized medicine to reality. Personalizing the [selection process](#) for clinical trials is a vital step.

With the development of new and better ways to examine and understand a tumor's molecular profile, matching the right patient to the right clinical trial becomes increasingly important. But handling the massive data evaluation necessary to accomplish this has been a stumbling block.

The newly patented computer system, Patent Number US 8,095,389 B2, or "Computer Systems and Methods for Selecting Patients for Clinical Trials," is designed to surmount that problem.

The newly patented computer system is designed to:

- Select patients to clinical trials matching an individual's/drug's molecular profile
- Match patients to clinical trials by a patient's disease/diagnosis
- Match patients to clinical trials by their symptoms
- Match [patients](#) to clinical trials by their demographic information and family history
- Track a clinical trial participant's disease progression compared to drug efficacy

The newly patented [computer system](#) and associated products, such as operating system, software, interfaces and data retrieval system, improve clinical trial selection efficacy by making the patient selection process less random and more selective. The technology has the potential to refine clinical trials by eliminating bottlenecks, overhauling the selection process and shortening the timeline, ultimately bringing new drugs to

market more efficiently.

Provided by H. Lee Moffitt Cancer Center & Research Institute

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