

Scientists propose new international cancer effort akin to Human Genome Project

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Scientists are proposing an international effort, on the scale of the Human Genome Project (HGP), to identify all the proteins present in cancer cells. HGP was the international scientific research project that identified and mapped all the genes in humans. Within a decade, they believe, results of the new effort could provide cancer patients with more effective treatments customized to their own biology. The perspective appears in ACS' *Journal of Proteome Research*.

Cristobal Belda-Iniesta and colleagues point out that medicine already is moving toward individual treatments instead of a "one size fits all" strategy. Doctors currently use information from tissue biopsies, medical imaging, and other sources to select the most effective treatment for each patient.

Analyzing [protein](#) biomarkers in each patient would be a major advance, since these proteins could allow doctors to determine how a particular cancer might respond to a specific drug. Scientists already have identified hundreds of these cellular calling cards, and now must identify more and begin applying the knowledge in treating patients.

Accomplishing it will require an international effort to identify these cancer-related proteins with collaboration among hospitals, research centers, and governments from around the world. Doctors would collect blood samples from patients with the major forms of cancer prior to surgery or during drug treatment for cancer in order to profile the proteins associated with the success or failure of a specific treatment,

with cancer's spread to distant sites in the body, and other factors. The results in improved treatments could begin to appear within 5 years of completing the project, they suggest.

More information: "Translational Proteomics: What Can You Do for True Patients?" pubs.acs.org/doi/abs/10.1021/pr100853a

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