The **HILOmet Phyziotype® System** offers clinicians the ability to personalize drug therapy and increase safety and compliance in the most challenging cases:

- Patients experiencing drug intolerance, side effects, treatment resistance or therapeutic failure to medications
- Patients treated with combinations of medications or medical devices
- Children, adolescents, the elderly and the infirm
- Patients hospitalized or with multiple medical conditions

The assays are non-invasive and require only a blood sample or buccal swab.

The **Personalized Health Portal®** provides clinicians access to real-time information for gene-guided prescription of 250 drugs widely used in medicine:

- **130 Neuro-Psychiatric**
  Drugs: antidepressants, pain, antipsychotics, stimulants, addiction, anticonvulsants, neurodegenerative, anxiolytics, sleep

- **120 Cardio-Metabolic**
  Drugs: hypertension, cholesterol, diabetes, gastric reflux, asthma, erectile dysfunction, angina, antithrombotics, heart failure

- Timesaving, user friendly, password protected, interactive web interface for decision support
- Benchmarking of innate drug metabolism function for each patient with comparisons to the population using 4 quantitative indices
- Drug interactions assessed via interactive display
- Clinician-customized archive of patient reports and drug selections + dosing
- Objective results, evidence-based predictive analyses and rapid turnaround of 3 business days

**TO ORDER:** Test Requisitions + Sample Reports available at [www.genomas.com/LPH](http://www.genomas.com/LPH)
Laboratory of Personalized Health, Genomas Inc., 67 Jefferson Street, Hartford, CT 06106
TEL: (860)-545-4589  FAX: (860)-545-4598  **LPH@genomas.net**  [www.genomas.com](http://www.genomas.com)
The HILOmet PhyzioType System.

Deployment of the HILOmet PhyzioType allows personalized management of drugs to treat mental illness, neurological disorders, diabetes, and heart disease. Based on Genomas clinical studies and case reports, the HILOmet PhyzioType offers interpretative guidance to assess the functional status of a patient’s drug metabolism in order to establish functionalities and deficiencies. Clinicians are then guided to make prescribing decisions based on knowledge of those metabolic capabilities and deficits. The HILOmet PhyzioType System enables clinicians to select the drug with the least risk and superior efficacy based on data derived from the patient’s own genome.

Using the HILOmet PhyzioType’s combinatorial genotyping, the innate metabolic capacity of the patient can be predicted and diagnosed simply from a blood sample or buccal swab. Patients intolerant to these drugs or refractory to treatment can be benchmarked for their drug metabolism function and innate reserve. Therapy can be directed to drugs whose primary metabolic pathway is functional, while avoiding drugs with the most risk, whose primary metabolic pathways are deficient, null or ultra-rapid.

The guidance provided by the HILOmet PhyzioType markedly improves the safety and efficacy of drug therapy by providing:

- High-resolution combinatorial genotyping of a total of 37 variants in genes CYP2D6, CYP2C9 and CYP2C19 (20, 7, and 10 alleles, respectively)
- Well-characterized ultra-rapid promoter alleles for genes CYP2D6 and CYP2C19 (*2a and *17, respectively) conferring gain of metabolic function in carriers
- Objective Indices for Metabolic Reserve and Alteration, Allele and Gene Alteration
- Interactive Drug Interactions utility allowing the clinician’s review of other medications jointly prescribed with recalculation of the therapeutic guidance

The genes coding for CYP2D6, CYP2C9 and CYP2C19 isoenzymes are critical for metabolism of neuro-psychiatric and cardio-metabolic drugs and polymorphic resulting in highly diverse metabolism function among individual patients.
Personalized Health Portal (PHP). The PHP integrates the patient’s innate drug metabolism capacity as determined by the HILQomet Phyziotype with pharmacokinetic information available from Genomas clinical studies, the FDA, drug manufacturers and pharmacogenetic databases. It guides clinicians to prescribe the drugs most beneficial for that patient and provides that guidance through an online, interactive secure portal.
Laboratory of Personalized Health (LPH). Established in 2005 as a Division of Genomas, LPH is a high-complexity clinical DNA testing center. LPH is certified by the Centers for Medicare and Medicaid Services (CMS) under CLIA (Clinical Laboratory Improvement Amendments, ID #07D1036625) and licensed by the Connecticut Department of Public Health (license #CL-0644) and by the Rhode Island Department of Health (license #LCO-00591). HILomet PhyizioType has been used by more than 400 clinicians in Connecticut who have referred nearly 4,000 patients (as of September 2012).

Extensive Research and Publications. Genomas technology has been developed in partnership with the Institute of Living and Hartford Hospital, a major research-based New England medical center. The HILomet PhyizioType has been extensively published and presented at professional meetings. The Personalized Health Portal is copyrighted. A patent is pending on the HILomet PhyizioType.

GENOMAS PUBLICATIONS: Selected Research Articles, Case Reports, Presentations, Patent, Copyright
12. Ruaño. Personalized Health Portal. Copyright Registration Number VA 1-797-692, 2010
22. Ruaño et al. High carrier prevalence of deficient and null alleles of CYP2 genes in a major USA hospital: Implications for personalized drug safety. Personalized Medicine, 3 (2): 131-137, 2006