Genomas: Personalized Medicine [1]

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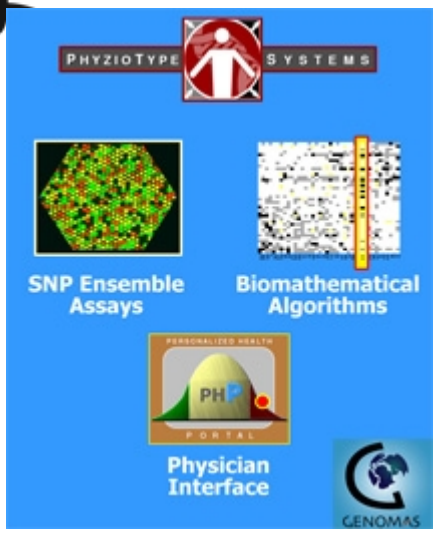

[2]

Overview of Genoma's PhyzioType System

Did you know that most of the prescribed or over the counter drugs have adverse reactions that we donít even know? The problem is that all the drugs that go out in the market, although tested in clinical trials, are studied in a representative sample of a population that probably will not represent what will happen to you. Most of the time when they go out to the market they present adverse reactions not reflected in the clinical trials. Then, what we should do? How we can predict if a drug that is supposed to cure me will kill me eventually? Thanks to Genomas [3] and Dr. Gualberto Ruaño [4] research, nowadays this is possible.

Gualberto Ruaño,M.D., Ph.D. [4], from Mayagüez, member of CienciaPR [5] and graduated from internal medicine and genetics from Yale [6], is the president of Genomas, Inc [3]. from Hartford, CT and a faculty of the Hartford Hospital [7]. He is also an adjunct professor of the University of Puerto Rico, Medical Sciences Campus. [8] **Dr. Ruaño** is an authority in the area of pharmacogenetics that is the area of science that identifies how each individual metabolizes or react to certain drugs according to its genome. By knowing how each individual metabolizes or react to a drug it is

possible to define what prescription strategy is the best for each case. *This is called DNA-guided personalized medicine.*

But, how **Genomas** identify this? What is the trick? Well, **Dr. Ruaño** and his research group developed the technology called ***PhyzioType,*** is an ensemble of **DNA** markers from several genes coupled to a biostatistical algorithm that predicts an individualís risk of developing an adverse drug reaction. Here an example to illustrate this better. One of the conditions prevalent in puertoricans is high cholesterol. The best drugs to lower cholesterol levels, which are used by millions of people worldwide, are statins (Lipitor, Zocor, Crestor, etc.). Statins inhibit HMG-CoA reductase [9] that is one of the key enzymes in the cholesterol biosynthesis. The problem is that statins induce a condition calles statin-induced neuromiopaty (SINM). SINM present a constellation of neuromuscular problems that converge in myalgia (muscle aches, cramps, weakness) and myositis (muscular injury monitored by serum elevation of muscle enzymes). Most of the people on statins need to suspend treatment after 6 months.

What **Dr. Ruaño** proposes is that a person that has been prescribed with statins be tested with the ***PhyzioType*** system. This analysis will tell the physician a **DNA**-guided risk profile to statins of the person to adverse neuromuscular effects. From this risk profile, the physician will know before prescribing what will be the possible adverse effect of the drug in your organism. By doing this, you avoid the adverse reactions of drugs and live fully. The system has been also adapted to antipsychotic drugs like Risperdal, Seroquel and Zyprexa and glucose-insulin modulators like Actos and Avandia. FDA [10] approval is expected in a couple of years.

Dr. Ruaño [4], besides being the president of Genomas [3], has been the mentor of many students from Puerto Rico that had the opportunity to do research at Genomas [3]. He also participate actively in Puerto Rico and the US in forums of health, biotechnology and pharmacogenetics. To know more about Dr. Gualberto Ruaño [4] and his research please visit his profile in CienciaPR [4] or the web page of Genomas [3].

Tags:

- Gualberto Ruaño [11]
- Genomas [12]

Categorías de Contenido:

- Biological and health sciences [13]

Links
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