

9<sup>th</sup> International Conference on  
**Predictive, Preventive & Personalized Medicine & Molecular Diagnostics**  
&  
3<sup>rd</sup> International Conference on **Integrative Medicine & Alternative treatments**

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### **PGx simplifies personalizing of prescription drugs**

Time is up for continuing to prescribe drugs by trial and error. Eliminate the guesswork. Most drugs work when prescribed to a 'right' patient. On the other hand, a 'right' drug prescribed to a 'wrong' patient could be and often is deadly. The dilemma is: how do you differentiate between 'right' and 'wrong' patient before prescribing a drug? Even siblings often metabolize drugs differently due to inherited mutations (variations) among genes in their livers. Pharmacogenetics (PGx) is here to guide you. PGx test involves a simple cheek swab, yet provides powerful clinically actionable data for the life of a patient. It predicts before a drug is prescribed, if it is a 'right' drug for the 'right' patient or it has a high risk of potentially creating Adverse Drug Reaction (ADR) due to a slow-acting gene, representing a 'wrong' patient and should be replaced by another therapeutically equivalent drug which is metabolized by another gene which is functioning normally in the patient's liver. Unmetabolized drug starts accumulating in the body and can lead to ADR due to increased toxicity and side effects, in millions of patients in the US alone. In fact, ADR is now the 4<sup>th</sup> leading cause of death here, one patient dies every 4 minutes. Insurance companies including Medicare often pay for the test.

**Who needs the PGx test urgently:** It's too late to order the test during surgeries in ERs. You need to have the patient's PGx report through EMR, EHR or cloud to prescribe personalized medicine to control pain, bleeding etc. I recommend every newborn should have the PGx test to ensure even first prescription the child will ever get be personalized to reduce the potential of an ADR. The risk of ADR increases exponentially by the number of prescription the patient is on. Coumadin/Warfarin, a commonly prescribed blood thinner to control thrombosis is the number one drug requiring ER visits among senior patients.

**PGx reducing healthcare cost:** University of Illinois Health's Personalized Medicine Program saved \$600K annually by reducing hospital readmissions when they used PGx test to guide dosing of only one drug, Coumadin/Warfarin.

**FDA requiring PGx test:** FDA along with EMA, PDMA and HCSC is recommending, in fact requiring a PGx test before prescribing 54 of the drugs carrying Black Box Warnings. Alas, healthcare professionals keep ignoring the requirement. I appeal to all healthcare professionals to be progressive and adopt PGx test and change their practices to personalized medicine

### **Biography**

Brahma D Sharma, PhD is a retired chemist from R&D and manufacturing of pharmaceutical and medical device industry. He is an author, inventor, scientist, entrepreneur, coach and speaker. His current book is 'Cracking the Genetic Code for Prescription Drugs'. His mission is to reduce Adverse Drug Reactions (ADR). It's the fourth leading cause of death in the US after heart attacks, strokes and cancer. One person dies every 4 minutes. Doctors have been relying on pharmaceutical manufacturers far too long. Drug companies often recommend one dose without considering patients' genetic variations which impact heavily on their drug's metabolism. One drug/one dose does not fit all. He is educating everyone, patients, doctors, healthcare providers etc. how to reduce ADR by incorporating Pharmacogenetics (PGx) testing in the practice and personalizing prescription drugs that match patient's hepatic gene variations. ADR is estimated to cost over \$136 Billion in the US not counting priceless suffering of patients and their loved ones. He believes that the addition of opioids often begins by the drugs prescribed by a doctor and taken as directed. His goal is for doctors to start with "Let's start with swabbing your cheek. This will tell me which drugs will do good for you and which drugs may harm you."

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### **Notes:**