

# Pharmacogenetics in Pharmaceutical Care – Piloting an Application-Oriented Blended Learning Concept

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## Abstract

To enable application-oriented training of Swiss pharmacists on pharmacogenetic (PGx) testing, an advanced, digital training program was conceptualized based on the Miller's Pyramid framework, using a blended learning approach. The PGx advanced training program included an asynchronous self-study online module, synchronous virtual classroom sessions with lectures and workshops, and a follow-up case study for in-depth applied learning including the analysis of the participants' PGx profile. The evaluation of the training program consisted of (a) an assessment of the participants' development of knowledge, competencies and attitudes towards PGx testing in the pharmacy setting; (b) a satisfaction survey including; (c) questions about their future plans for implementing a PGx service. Twenty-one pharmacists participated in this pilot program. The evaluation showed: (a) a significant improvement of their PGx knowledge (mean score in the knowledge test 75.3% before to 90.3% after training completion) and a significant increase of their self-perceived competencies in applying PGx counselling; (b) a high level of satisfaction with the training program content and the format (at least 79% expressed high/very high agreement with the statements in the questionnaire); (c) a mixed view on whether participants will implement PGx testing as a pharmacy service (indecisive 8; agreed/completely agreed to implement 7/1; disagreed 3 (n = 19)). We consider ongoing education as an important driver for the implementation of PGx in pharmacy practice.

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