**Pharmacogenomics Certificate Program: Clinical Application of Pharmacogenomics Part I**

Release Date: September 20, 2018

Expiration Date: September 20, 2021

Activity Type: Application-based

**Accreditation for Pharmacists**

The American Society of Health-System Pharmacists is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

**Target Audience**

This continuing pharmacy education activity is intended for pharmacists seeking to expand their knowledge and skills in using and implementing pharmacogenomics in their practice to ultimately improve medication use.

**Learning Objectives and Schedule of Activities**

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| CE Information | Title, Description, and Learning Objectives |
| ACPE #: 0204-0000-18-746-H01-PCredit Hours: 2.25Activity Type: Application-based | **Title: Clinical Application of Pharmacogenomics Part I**This activity discusses the clinical application of pharmacogenomics in cardiology, oncology, and pain.**Faculty:** * **Gillian Bell, Pharm.D.,** Mission Health, UNC Eshelman School of Pharmacy, Asheville, North Carolina
* **Cyrine-Eliana Haidar, Pharm.D., BCOP, BCPS,** St. Jude Children’s Research Hospital, Memphis, Tennessee
* **James C. Lee, Pharm.D., BCACP,** University of Illinois at Chicago College of Pharmacy, Chicago, Illinois
* **Laura B. Ramsey, Ph.D.,** Cincinnati Children’s Hospital Medical Center, University of Cincinnati, Ohio

**Learning Objectives:** * Describe the utility and considerations for pharmacogenomic testing in the selection and management of antithrombotic medications.
* Interpret evidence-based guidelines for *CYP2C19* and *CYP2C9*, *VKORC1*, and *CYP4F2* to guide antiplatelet agent selection and warfarin dosing.
* Apply *CYP2C19* genotyping to individualize antiplatelet agent selection in patients with acute coronary syndromes undergoing percutaneous coronary intervention.
* Employ available dosing tools to start anticoagulation therapy with warfarin in patients with *CYP2C9, VKORC1*, and *CYP4F2* genotyping.
* Interpret evidence-based guidelines for *SLCO1B1* to guide simvastatin dosing.
* Describe the role of germline polymorphisms and somatic mutations in oncology.
* Interpret genotype test results to individualize chemotherapy regimen and dosing selection.
* Apply genotype results to individualize supportive care management in oncology patients.
* Describe the utility and considerations for pharmacogenomic testing in the selection and management of pain medication.
* Interpret *CYP2D6* genotype results to individualize pain medication selection.
* Recognize emerging genetic variations that may be informative for pain medication selection.
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**Disclosure of Relevant Financial Relationships**

In accordance with the ACPE's and ACCME's Standards for Commercial Support, anyone in a position to control the content of an educational activity is required to disclose to the accredited provider their relevant financial relationships. In accordance with these Standards, all potential conflicts of interest have been resolved. *An individual has a* ***relevant financial relationship*** *if he or she (or spouse/domestic partner) has a financial relationship in any amount occurring in the last 12 months with a commercial interest whose products or services are discussed in the activity content over which the individual has control.*

As defined by ACCME, a **commercial interest** is any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients. The Standards for Commercial Support do not consider providers of clinical service directly to patients to be commercial interests.

* **Henry “Mark” Dunnenberger,** Consultant:Veritas Genetics
* **All other planners, presenters, reviewers, and ASHP staff report no financial relationships relevant to this activity.**

**Methods and CE Requirements**

This online activity consists of a combined total of 8 learning modules. Pharmacists are eligible to receive a total of 18.25 hours of continuing education credit by completing all 8 modules within this certificate program.

Participants must participate in the entire activity and complete the evaluation to earn continuing pharmacy education credit. Follow the prompts online at the ASHP eLearning portal (<http://elearning.ashp.org>) to claim credit and view statements of credit within 60 days of completing the activity. Credits will be reported directly to CPE Monitor. To verify that you have completed the required steps and to ensure your credits hours have been reported to CPE Monitor, we encourage you to check your NABP eProfile account to validate your credits were transferred successfully before the ACPE 60-day deadline. After the 60 day deadline, ASHP will no longer be able to award credit for this activity.

**System Technical Requirements**

Courses and learning activities are delivered via your Web browser and Acrobat PDF. Users should have a basic comfort level using a computer and navigating websites.

View the [minimum technical and system requirements](http://elearning.ashp.org/get-started) for learning activities.

**Acknowledgements of Support**

This activity was planned and developed by The American Society of Health-System Pharmacists.