

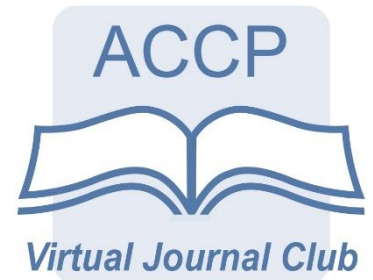
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**β -Adrenergic Receptor Gene Affects the Heart Rate Response of β -Blockers:
Evidence From 3 Clinical Studies**

2019 ACCP Virtual Journal Club Webinar

Live Session: Wednesday, August 28, 2019 from 2:00 PM to 3:00 PM ET

On Demand: August 28, 2019 to August 28, 2022



Why is this webinar important to you?

β -Blockers' heart rate (HR)-lowering effect is an important determinant of the effectiveness for this class of drugs, yet it is variable among β -blocker-treated patients. To date, genetic studies have revealed several genetic signals associated with HR response to β -blockers; however, these genetic signals have not been consistently replicated across multiple independent cohorts. In this presentation, we will share the results from a genetic analysis that included data from three hypertension clinical trials to validate single-nucleotide polymorphisms (SNPs) previously associated with the HR response to β -blockers. Using linear regression analysis, we investigated the effects of six SNPs in three genes, including ADRB1, ADRB2 and GNB3, relative to the HR response following β -blocker used in the Pharmacogenomics Evaluation of Antihypertensive Responses (PEAR) (n=757), Pharmacogenomics Evaluation of Antihypertensive response-2 (PEAR -) (n=368) and International Verapamil and Trandolapril Study (n=1,401) trials, adjusting for baseline HR, age, gender and ancestry. The results of our analyses provide strong evidence to support the hypothesis that rs1042714 and rs1042713 in the ADRB2 gene are important predictors of HR response to cardioselective β -blockade in hypertensive patient cohorts.



ACPE Accreditation Statement

The American College of Clinical Pharmacology is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.

UAN: 0238-0000-19-036-L/H01-P – ACPE 1 Contact Hours

Activity Type: Knowledge-based **Format:** Live & Home-study **Target Audience:** 'P'



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The American College of Clinical Pharmacology is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

ACCME Designation Statement

The Accreditation Council for Continuing Medical Education designates this live and enduring CE activity for 1 *AMA PRA Category 1™* credit. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Target Audience

Interprofessional team of Physicians, Pharmacists, PhDs, Nurse Practitioners and Physician Assistants.

Learning Objectives

After completing this activity, the learner will be able to:

- 1) Describe the mechanism of action of Beta-receptor blocker drugs in reducing blood pressure;
- 2) Identify which polymorphism variant type is most common for the ADRB1, ADRB2 and GNB3 genes;
- 3) State which ADRB2 genotypes contribute to the greatest reduction in heart rate.

Requirements to Receive Credit

In order to receive continuing medical education (CME) or continuing pharmacy education (CPE) credit, the learner must register for the educational activity, study the provided journal article, attend the Live webinar or view the On-Demand webinar, complete the online learning Self-assessment Post-test as well as the online course Evaluation and CME/CPE Certificate. Credits and CME/CPE Certificates must be claimed within thirty (30) days of completing the webinar, Post-test and Evaluation. Contact CE@ACCP1.org with any questions.

Disclosures:

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CE Reviewer: David F. Kisor, BS, PharmD, FCP, Professor and Director of Pharmacogenomics Education, Manchester Univ

Schedule & Fees

ACCP webinar programs occur several times per year. Registration for the webinars are required, but are free of charge to all learners.

Acknowledgement of Financial Support

No financial support was received for this educational activity.

Home Study Initial Release and Expiration Dates

Date of Issuance: August 28, 2019

Expiration Date: August 28, 2022

Helpful Tips

For best audio and visual quality, we recommend viewing the webinar in the Chrome browser. If you do not have Chrome, you may download it [here](#).

Test your browser compatibility before the webinar by clicking [here](#).

Download the article and slide handouts and access the webinar [here](#).

For help during the webinar, please call (571) 291-3493 ext 4.

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