

Team discovers certain ARB drugs are better than others to treat heart failure

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Millions of people take angiotensin receptor blockers (ARBs) to help treat heart failure. But it turns out not all ARBs are created equally, according to one Nova Southeastern University (NSU) researcher's findings.

Anastasios Lymperopoulos, Ph.D., F.A.H.A., assistant professor of pharmacology at NSU's College of Pharmacy, along with his research team, conducted a study on biological models over a seven-day period that found Valsartan (Diovan) and Candesartan (Atacand) were more effective than Irbesartan (Aprovel, Karvea and Avapro) at preventing the increased production of the hormone aldosterone, which, if untreated, can lead to [heart failure](#).

"This can help cardiologists and other clinicians tremendously when they are deciding which ARB drug to choose for the treatment of [heart](#) failure patients," Lymperopoulos said.

Aldosterone is formed by the [adrenal gland](#) through a protein called beta-arrestin1, which Lymperopoulos previously discovered. A normal level of the hormone is essential to maintaining blood volume, but elevated levels can cause hypertension ([high blood pressure](#)), cardiac fibrosis (collagen deposition in the heart muscle), hypertrophy (increased size of cells) and inflammation, all factors that can cause heart failure.

The research team consisted of Lymperopoulos's lab at NSU, a team led by Patricia McDonald, Ph.D., at Scripps Florida, and Walter J. Koch's, Ph.D., lab at Temple University in Philadelphia.

Their findings are published in the peer-reviewed *Journal of the American College of Cardiology* (Vol. 64, No. 25, 2014) in an article titled "Different Potencies of Angiotensin Receptor Blockers at Suppressing Adrenal β -Arrestin1-Dependent Post-Myocardial Infarction Hyperaldosteronism." Results

of the study are also published in *Scientific Reports* (Vol. 5, Jan. 29, 2015), a journal of the Nature Publishing Group, in an article titled "Suppression of adrenal β -arrestin1-dependent aldosterone production by ARBs: head-to-head comparison."

Provided by Nova Southeastern University

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