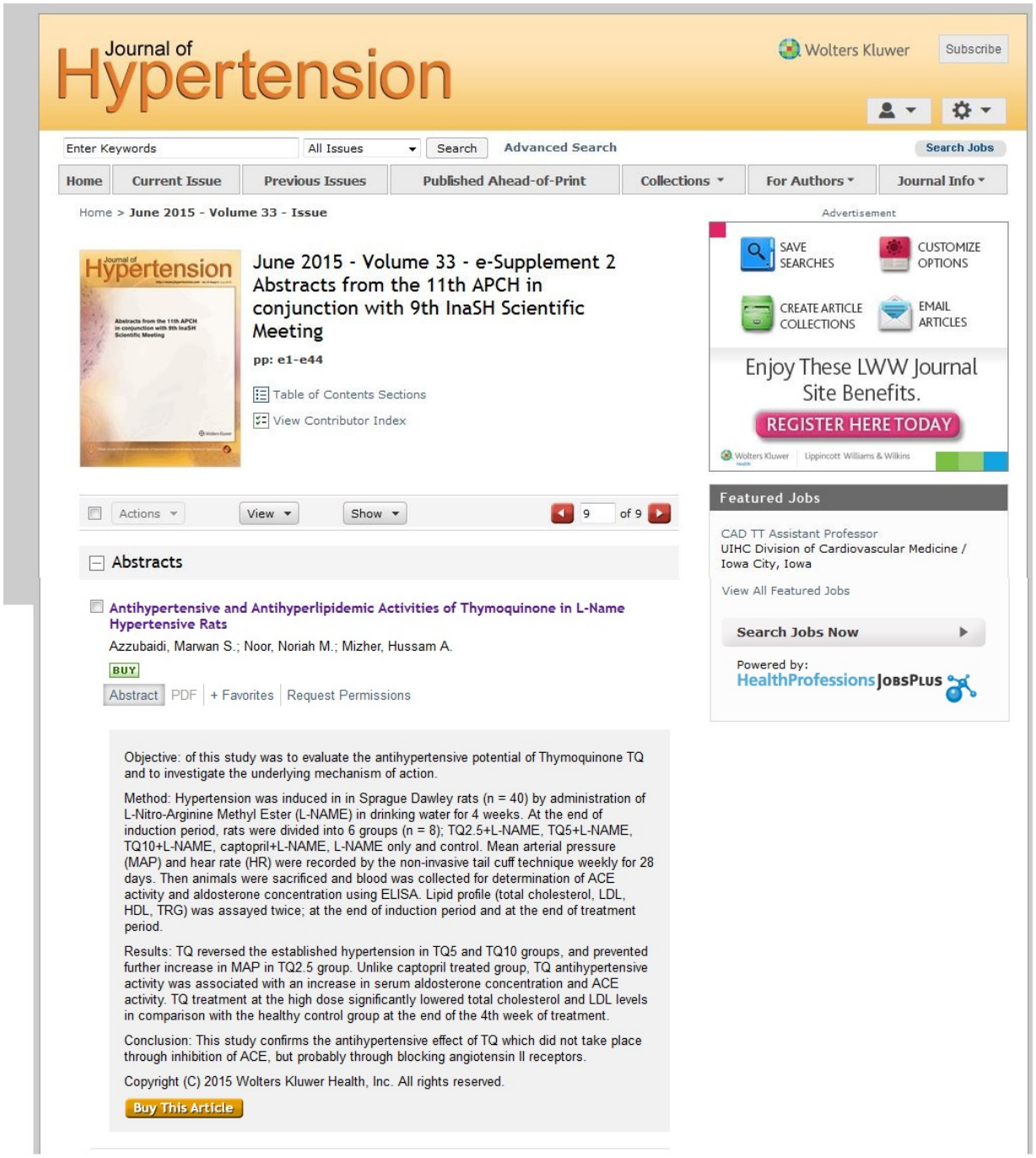

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Abstracts

Antihypertensive and Antihyperlipidemic Activities of Thymoquinone in L-Name Hypertensive Rats

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Objective: of this study was to evaluate the antihypertensive potential of Thymoquinone TQ and to investigate the underlying mechanism of action.

Method: Hypertension was induced in in Sprague Dawley rats (n = 40) by administration of L-Nitro-Arginine Methyl Ester (L-NAME) in drinking water for 4 weeks. At the end of induction period, rats were divided into 6 groups (n = 8); TQ2.5+L-NAME, TQ5+L-NAME, TQ10+L-NAME, captopril+L-NAME, L-NAME only and control. Mean arterial pressure (MAP) and hear rate (HR) were recorded by the non-invasive tail cuff technique weekly for 28 days. Then animals were sacrificed and blood was collected for determination of ACE activity and aldosterone concentration using ELISA. Lipid profile (total cholesterol, LDL, HDL, TRG) was assayed twice; at the end of induction period and at the end of treatment period.

Results: TQ reversed the established hypertension in TQ5 and TQ10 groups, and prevented further increase in MAP in TQ2.5 group. Unlike captopril treated group, TQ antihypertensive activity was associated with an increase in serum aldosterone concentration and ACE activity. TQ treatment at the high dose significantly lowered total cholesterol and LDL levels in comparison with the healthy control group at the end of the 4th week of treatment.

Conclusion: This study confirms the antihypertensive effect of TQ which did not take place through inhibition of ACE, but probably through blocking angiotensin II receptors.

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