Impact of nor-NOHA on down-regulation of spermine in DMBA-induced breast cancer in rats

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The goal of work was to study the influence of spermine down-regulation by N\textsuperscript{G}-hydroxy-nor-L-arginine (nor-NOHA) on breast cancer developing in rats induced by 7,12-dimethylbenz[a]anthracene (DMBA).

Rats (Wistar, 90-120g, female) were divided into five groups (control, saline, control nor-NOHA, DMBA and DMBA+nor-NOHA, n=7). DMBA was administrated (i.g.) with a 20 mg/ml olive oil single dose. Nor-NOHA was injected (i.p.) for 5 weeks (after 10 days of DMBA, every 3\textsuperscript{rd} day) in dose of 3 mg/kg body-weight in 0.25ml saline.

Co-treatment with nor-NOHA decreased blood spermine level in 13\textsuperscript{th} and 20\textsuperscript{th} weeks comparing to the DMBA and control groups. Histopathological examination in DMBA group in 20\textsuperscript{th} week has revealed the invasive ductal and lobular carcinoma, and in DMBA+nor-NOHA group - only lobular carcinoma \textit{in situ}. It is concluded spermine quantity downstream attenuated tumor growth and progression.