

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^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 3th day) in dose of 3 mg/kg body-weight in 0.25ml saline.

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