period of tail retraction by 19.5% ($P \leq 0.05$, n = 10) relatively to control (n = 10). This indicates the presence of an analgesic effect of HDA+BTB in a dose 50 mg/kg, implemented with the participation of the perceptual component of nociception and the spinal mechanism for regulating pain sensitivity. In female rats this indicator has not changed significantly.

In the 'hot plate' test in male rats, HDA+BTB in a dose of 50 mg/kg significantly increased latent period of pain reaction by 57.1% ($P \leq 0.01$, n = 10) compared to the control (n = 10). In female rats HDA+BTB in a dose of 5 mg/kg also significantly increased latent period of pain reaction by 37.8% ($P \leq 0.01$, n = 10) relatively to control (n = 10). This indicates the participation of supraspinal mechanisms in the thermal pain sensitivity.

Conclusions: It was found that HDA+BTB in doses significantly changes the thermal pain sensitivity of male and female rats in thermal pain tests ('tail-flick' and 'hot plate'), showing gender specificity of the analgesic effect with the participation of various pain mechanisms and nociception components. This compound recommended for further preclinical tests of its analgesic activity.

A possible reason for the gender specificity of HDA+BTB analgesic effect is the different tolerance of receptors and structures of the central and peripheral nervous system in males and females rats to pain, and participation of various nociception components.

S16 – TRANSLATIONAL ALLERGOLOGY

54ASM-0403 | Immunology and mammary cancer development: addressing the role of mast cells

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Background: Mammary cancer is one of the most frequent cancers worldwide. Mast cells are among the cells of tumor microenvironment and have been associated with increased angiogenesis and poor prognosis. Despite this, the role of mast cells on mammary cancer is not fully elucidated. In this way, this work studied the role of mast cells in a rat model of mammary cancer chemically-induced.

Materials and Methods: All experiments were performed in accordance with the Portuguese and European legislation on the protection of animals used for scientific purposes. The experiments were approved by the Portuguese (no.008961) and University (CE_12-2013) Ethics Committees. Thirty-four female Sprague-Dawley rats were randomly divided into five experimental groups. At seven weeks of age, mammary tumors' development was induced in animals from groups I, II, III (n = 10+10+10) by a single intraperitoneal injection of the carcinogen *N*-methyl-N-nitrosourea (MNU). Groups II and IV (n = 2) were treated with ketotifen in drinking water (1 mg/kg/day, 7 days/week) immediately after the MNU administration for 18 weeks, while the group III received the ketotifen after the development of the first mammary tumor. Groups I and V (n = 2) received only water. Animals were sacrificed at 25 weeks of age by an overdose of ketamine and xylazine, followed by an exsanguination by cardiac puncture. Mammary tumors were collected and immersed in formalin for posterior analysis. Tumors' vascularization, proliferation and apoptosis were also assessed by immunohistochemistry (Vascular Endothelial Growth Factor (VEGF)-A, Ki-67, and caspase-3 and caspase-9).

Results: Animals from groups IV and V did not develop any mammary tumor. Twenty-one animals (six animals from group I, eight animals from group II and seven animals from group III) developed a total of 58 mammary tumors, mainly classified as papillary non-invasive carcinomas. Tumors' vascularization was similar among groups ($P > 0.05$). Mammary tumors from group II exhibited the lowest proliferation ($P < 0.05$) and apoptotic indexes.

Conclusions: The mainly positive effect of the ketotifen administration seems to be the reduction of tumor proliferation when the drug was administered before mammary tumor development.

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S17 – PATHOPHYSIOLOGY AND TREATMENT OF COVID-19

54ASM-0391 | Bioscreening effects of 1-hydroxyethane-1,1-diphosphonic acid adduct and bis(2-pyridyl)-3-(1,2,4-triazolyl)butane on female rats behavior in the 'open field' test

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Short Presentation Certificate

This is to certify that

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