

# Differentiation in Murine Mastocytoma Induced by Macrophage Gangliosides

Lars Schaade<sup>a</sup>, Reiner Thomssen<sup>b</sup> and Klaus Ritter<sup>a,\*</sup>

<sup>a</sup> Division of Virology, Department of Medical Microbiology, University Hospital, RWTH Aachen, D-52057 Aachen, Germany.

Fax: +49 241 8888483. E-mail: kriter@post.klinikum.rwth-aachen.de

<sup>b</sup> Department of Medical Microbiology, Georg-August University Göttingen, Kreuzberggring 57, D-37075 Göttingen, Germany

\* Author for correspondence and reprint requests

Z. Naturforsch. **55c**, 1004–1010 (2000); received May 11/July 7, 2000

Gangliosides, Tumor, Growth Arrest

In the membrane of mouse macrophages two gangliosides were detected which inhibit the division of murine mastocytoma P815 tumor cells. The two gangliosides were incorporated into the cytoplasmatic membrane of mastocytoma cells. The concentration necessary to achieve a complete inhibition of P815 tumor cell division is about 1  $\mu\text{M}$  for both effective gangliosides. Macrophage ganglioside-induced inhibition of cell division is accompanied by morphological changes of the mastocytoma cells. While the cells are rounding, their diameter increases and serotonin and granules appear in the cytoplasm of the enlarged cells. Our findings suggest that macrophage gangliosides may differentiate mastocytoma cells into mast cells.