

Prof. Dr. Manfred Volm

Department: Cell Biology

CV:

MANFRED VOLM

Prof. Dr.

Personal

Date of birth: November 20, 1934

Place of birth: Birkheim (Emmelshausen), Germany

Academic Education and Appointments

1956 – 1964

Studies in Biology, Chemistry and Philosophy, Universities of München and Tübingen

1964

Promotion (PhD) Institute of Zoology, Department of Developmental Physiology, Tübingen

1964 – 1965

Scientist, Institute of Cell Physiology, Mainz

1965 – 1991

Scientist and Head (1972) of the Department of Cell Biology, German Cancer Research Center

1971

Habilitation in Theoretical Medicine, University of Heidelberg

1974

Professor of Experimental Oncology, University of Heidelberg

1991 – 2000

Supervising Scientist, Research Group: Cellular Prognostic Factors in Tumors, German Cancer Research Center

2000

Emeritus status

Papers Published in Periodicals: 370

Memberships: German Cancer Society, American Association for Cancer Research

Publications

(This is not a complete list of publications, but only a selection of the major ones.)

Volm, M., Wayss, K., Kaufmann, M. and Mattern, J.: Pretherapeutic detection of tumour resistance and the results of tumour chemotherapy. *Europ. J. Cancer* 15, 983-993 (1978).

Cooperative Study Group for Sensitivity Testing of Tumors (KSST) (K. Goerttler, J. Mattern, M. Volm, K. Wayss, E. Weber et al.): In vitro short-term test to determine the resistance of human tumors to chemotherapy. *Cancer* 48, 2127-2135 (1981).

Volm, M., Brüggemann, A., Günther, M., Kleine, W., Pfeiderer, A. and Vogt-Schaden, M.: Prognostic relevance of ploidy, proliferation, and resistance-predictive tests in ovarian carcinoma. *Cancer Res.* 45, 5180-5185 (1985).

Volm, M., Hahn, E.W., Mattern, J., Müller, Th., Vogt-Moykopf, I., and Weber, E.: Five-year follow up study of independent clinical and flow cytometric prognostic factors for the survival of patients with non-small cell lung carcinoma. *Cancer Res.* 48, 2923-2928 (1988).

Volm, M., Efferth, Th., Bak, M., Ho, A.D., Mattern, J.: Detection of the multidrug resistant phenotype in human tumours by monoclonal antibodies and the streptavidin-biotinylated phycoerythrin complex method. *Eur. J. Cancer Clin. Oncol.* 25, 743-749 (1989).

Pommerenke, E.W., Osswald, H., Hahn, E.W., and Volm, M.: Activity of various amphiphilic agents in reversing multidrug resistance of L 1210 cells. *Cancer Letters* 55, 17-23 (1990).

Efferth, T. and Volm, M.: Antibody-directed therapy of multidrug-resistant tumour cells. *Med. Oncol. Pharmacother.* 9, 11-19 (1992).

Volm, M., Mattern, J., and Samsel, B.: Relationship of inherent resistance to doxorubicin, proliferative activity and expression of P-glycoprotein 170 and glutathione S-transferase in human lung tumors. *Cancer* 70, 764-769 (1992).

Volm, M. and Mattern, J.: Expression of topoisomerase II, catalase, metallothionein and thymidylate-synthase in human squamous cell lung carcinomas and their correlation with doxorubicin-resistance and with patients' smoking habits. *Carcinogenesis* 13, 1947-1950 (1992).

Wodrich, W. and Volm M.: Overexpression of oncoproteins in non-small cell lung carcinomas of smokers. *Carcinogenesis* 14, 1121-1124 (1993).

Koomägi, R., Mattern, J. and Volm, M.: Up-regulation of resistance-related proteins in human lung tumors with poor vascularization. *Carcinogenesis* 16, 2129-2133 (1995).

Pommerenke, E.W., Sinn, H. and Volm M.: Circumvention of doxorubicin-resistance in tumours by albumin conjugated-doxorubicin. *Eur. J. Cancer* 31A, 283-284 (1995).

Mattern, J., Kallinowski, F., Herfarth, Ch. and Volm, M.: Association of resistance-related protein expression with poor vascularization and low levels of oxygen in human rectal cancer. *Int. J. Cancer* 67, 20-23 (1996).

Stammler, G., Pommerenke, E.W., Masanek, U., Mattern, J. and Volm, M.: Messenger RNA expression of resistance factors in human tumor cell lines after single exposure to radiation. *J. Exp. Ther.* 1, 39-48 (1996).

Mattern, J., Koomägi, R. and Volm, M.: Xenotransplantability of human cancers in mice. *J Natl Cancer Inst* 90: 1747 (1998).

Volm, M., Rittgen, W. and Drings, P.: Prognostic value of ERBB-1, VEGF, cyclin A, FOS, JUN and MYC in patients with squamous cell lung carcinomas. Br J Cancer 77, 663-669 (1998).

Volm, M. and Rittgen, W.: Cellular predictive factors for drug response of lung cancer. Anticancer Res. 20, 3449-3458 (2000).

Volm, M., Koomagi, R., Mattern, J. and Efferth, T.: Protein expression profiles indicative for drug resistance of non-small cell lung cancer. Sr J Cancer 87, 251-257 (2002).

Volm, M. and Efferth, T.: Prediction of cancer drug resistance and implications for personalized medicine. Front. Oncol 5, 282 (2015).

Efferth, T., and Volm, M.: Multiple resistance to carcinogens and xenobiotics: P-glycoprotein as universal detoxifiers. Arch. Toxicol 91, 2515-2538 (2017).

Awards

1985

Farmitalia Carlo Erba Prize, for Studies on Cellular Prognostic Factors

1989

Farmitalia Carlo Erba Prize, for Studies on Resistance of Tumors

1989

Obrath-Prize for Studies on Resistance of Tumors