Prof. Dr. med. Wilfried Roth

Institute of Pathology, Heidelberg, and:
German Cancer Research Center (DKFZ), Heidelberg

Institute of Pathology
Im Neuenheimer Feld 220
69120 Heidelberg
06221 56 2647 (phone)
06221 42 3630 (fax)
Wilfried.Roth@med.uni-heidelberg.de

and:
German Cancer Research Center (DKFZ)
Im Neuenheimer Feld 280
69120 Heidelberg
Germany

SCIENTIFIC VITA

1990-1992	Studies of Philosophy and History, University of Tübingen, Germany
1992-1998	Studies of Medicine, University of Tübingen, Med. School, Germany
1998	MD thesis ('summa cum laude')
1998-2000	Junior Residency in Neurology, University of Tübingen, Germany
2000-2003	Postdoctoral Fellow, The Burnham Institute, San Diego, CA, USA
2003-2004	Residency in Neuropathology, University of Bonn, Germany
2004-2009	Residency in General Pathology, University of Heidelberg, Germany
2005-2011	Head of Max Eder Research Group at the German Cancer Research Center (DKFZ) and Institute of Pathology, Heidelberg
2008	Habilitation
2009	Board Certification General Pathology
2009-2011	Senior Pathologist (Oberarzt) in General Pathology, University of Heidelberg
2010-2011	Helmholtz Management Academy (Malik Management Center St. Gallen)
2011-now	Head of Clinical Cooperation Unit “Molecular Tumor Pathology” at the Institute of Pathology, Heidelberg, and the German Cancer Research Center (DKFZ)
2011-now	Chief Consultant Pathologist (Geschäftsführender Oberarzt) in General Pathology, University of Heidelberg
2011-now	Professor of Molecular Tumor Pathology at the Institute of Pathology, Heidelberg, and the German Cancer Research Center (DKFZ)

AWARDS

1987	Award from the German Association for Political Studies
1989	Award from the German Society for Literature
1989	Award from the Fond of the German Chemical Industry
1993	Scholarship from the "Cusanuswerk" foundation
1997	Dissertation Award from the German Society for Hematology and Oncology
1998	Young Researcher Award from the German Congress of Physicians
2002	Scholar-in-Training Award from the American Association for Cancer Research
2007	Poster award from the German Society for Pathology
2009	Rudolf-Virchow Award from the German Society for Pathology

GRANTS

- Tübingen Fortune (1999-2000)

- Research Grant from the German Research Foundation (DFG, Emmy Noether Program, Phase I) (2000-2002)
- Research Grant from the Cancer Research Institute, USA (2002-2003)
- Tumorzentrum Mannheim/Heidelberg (2005-2007)
- Max Eder Junior Research Group, funded by the German Cancer Aid (Deutsche Krebshilfe) (since 2005)
- BMBF (Federal Ministry for Education and Research) (since 2008)
- Hopp Foundation (since 2009)
- Manfred Stolte Foundation (since 2010)
- Deutsche Krebshilfe (since 2011)

FIELDS OF INTEREST

Molecular tumor pathology (colon cancer, urological tumors, brain tumors)
Therapy resistance in cancer: Intracellular mechanisms of cell death resistance
Signal transduction in immunological diseases and cancer: apoptotic signaling pathways
Identification of tumor biomarkers
Preclinical evaluation of novel apoptosis-based therapies
Alternative cell death mechanisms (autophagy, necrosis)

PUBLICATIONS (selected)

Tagscherer KE, Fassl A, Sinkovic T, Combs S, **Roth W** p53-dependent regulation of Mcl-1 contributes to synergistic cell death by ionizing radiation and the Bcl-2/Bcl-XL inhibitor ABT-737. *Apoptosis*, in press

Roth W, Macher-Göppinger S, Schirmacher P Pathology and molecular pathogenesis of renal cell cancer. *Nephrologe*, in press

Gdynia G, Schnitzler P, Brunner E, Kandolf R, Bläker H, Daum E, Schnabel P, Schirmacher P, **Roth W** Sudden death of an immunocompetent young adult caused by novel (swine origin) influenza A/H1N1-associated myocarditis. *Virchows Archiv* 458, 371-76, 2011

Macher-Goeppinger S, Bermejo JL, Wagener N, Hohenfellner M, Haferkamp A, Schirmacher P, **Roth W** Expression and prognostic relevance of the death receptor CD95 (Fas/APO1) in renal cell carcinomas. *Cancer Letters* 301, 203-11, 2011

Gdynia G, Keith M, Kopitz J, Bergmann M, Fassl A, Weber ANR, George J, Kees T, Zentgraf HW, Wiestler OD, Schirmacher P, **Roth W** Danger signaling protein HMGB1 induces a distinct form of cell death accompanied by formation of giant mitochondria. *Cancer Research* 70, 8558-68, 2010

Böck BC, Tagscherer KE, Fassl A, Krämer A, Oehme I, Zentgraf HW, Keith M, **Roth W** The PEA-15 protein regulates autophagy via activation of JNK. *Journal of Biological Chemistry* 285, 21644-54, 2010

Roth W Tumorpathologie und Zelltod: Regulation der Apoptose in malignen Tumoren. *Onkologie heute* 1, 10-13, 2010

Roth W Apoptosis resistance in malignant tumors: Novel apoptosis-based therapeutic approaches. *Pathologe* 30 Suppl 2, 113-6, 2009

Funke B, Autschbach F, Kim S, Lasitschka F, Strauch U, Rogler G, Gdynia G, Li L, Gretz N, Macher-Goeppinger S, Sido B, Schirmacher P, Meuer S, **Roth W** Functional characterization of Decoy Receptor 3 in Crohn's disease. *Gut* 58, 483-91, 2009

Macher-Goeppinger S, Aulmann S, Tagscherer KE, Wagener N, Haferkamp A, Penzel R, Brauckhoff A, Hohenfellner M, Sykora J, Walczak H, Teh BT, Autschbach F, Herpel E, Schirmacher P, **Roth W** Prognostic value of Tumor Necrosis Factor-Related Apoptosis-inducing ligand (TRAIL) and TRAIL receptors in renal cell cancer. *Clinical Cancer Research* 15, 650-9, 2009

Tagscherer KE, Fassl A, Campos B, Farhadi M, Kraemer A, Boeck BC, Macher-Goeppinger S, Radlwimmer B, Wiestler OD, Herold-Mende C, **Roth W** Apoptosis-based treatment of glioblastoma with ABT-737, a novel small molecule inhibitor of Bcl-2 family proteins. *Oncogene* 27, 6646-56, 2008

Eckert A, Böck B, Tagscherer K, Haas TL, Grund K, Sykora J, Herold-Mende C, Ehemann V, Hollstein M, Chneiweiss H, Wiestler OD, Walczak H, **Roth W** The PEA-15/PED protein protects glioblastoma cells from glucose deprivation-induced apoptosis via the ERK/MAP kinase pathway. *Oncogene* 27, 1155-1166, 2008

Grund K, Ahmadi R, Jung F, Funke V, Gdynia G, Benner A, Sykora J, Walczak H, Joos S, Felsberg J, Reifenberger G, Wiestler OD, Herold-Mende C, **Roth W** Troglitazone-mediated sensitization to TRAIL-induced apoptosis is regulated by ROS-dependent degradation of FLIP and ERK-dependent phosphorylation of BAD. *Cancer Biology & Therapy* 7, 1982-90, 2008

Macher-Goeppinger S, Aulmann S, Wagener N, Funke B, Tagscherer KE, Haferkamp A, Hohenfellner M, Kim S, Autschbach F, Schirmacher P, **Roth W** Decoy Receptor 3 is a prognostic factor in renal cell cancer. *Neoplasia* 10, 1049-56, 2008

Gdynia G, Lehmann J, Sieber S, Tagscherer K, Fassl A, Zentgraf H, Matsuzawa S, Reed JC, **Roth W** BLOC1S2 interacts with the HIPPI protein and sensitizes NCH89 glioblastoma cells to apoptosis. *Apoptosis* 13, 437-47, 2008

Gdynia G, Grund K, Eckert A, Böck BC, Funke B, Macher-Göppinger S, Sieber S, Herold-Mende C, Wiestler B, Wiestler OD, **Roth W** Basal caspase activity promotes migration and invasiveness in glioblastoma cells. *Molecular Cancer Research* 5, 1232–40, 2007

Gassler N *, **Roth W** *, Funke B, Schneider A, Herzog F, Tischendorf JJW, Grund K, Penzel R, Bravo IG, Mariadason J, Ehemann V, Sykora J, Haas TL, Walczak H, Ganten T, Zentgraf H, Erb P, Alonso A, Autschbach F, Schirmacher P, Knüchel R, Kopitz J Regulation of enterocyte apoptosis by acyl-CoA synthetase 5 splicing. *Gastroenterology* 133, 587–598, 2007 *(* shared first authorship)*

Schultze K, Böck B, Eckert A, Oevermann L, Ramacher D, Wiestler O, **Roth W** Troglitazone sensitizes tumor cells to TRAIL-induced apoptosis via down-regulation of FLIP and Survivin. *Apoptosis* 11, 1503-12, 2006

Roth W, Bucsenez D, Bläker H, Berger I, Schnabel P Misalignment of pulmonary vessels with alveolar capillary dysplasia: Association with atrioventricular septal defect and quadricuspid pulmonary valve. *Virchows Archiv* 448, 375-378, 2006

Roth W, Reed JC *FLIP protein and TRAIL-induced apoptosis. Vitamins and Hormones* 67, 189-206, 2004

Roth W, Kermer P, Krajewska M, Welsh K, Davis S, Krajewski S, Reed JC. Bifunctional apoptosis inhibitor (BAR) protects neurons from diverse cell death pathways. *Cell Death Differ* 10, 1178-87, 2003

Weller M, Wick W, Steinbach J, Wagenknecht B, Naumann U, **Roth W**. The role of apoptosis in cancerogenesis and resistance to therapy: lessons from malignant glioma. In: Zierhut M, Jager, M., Ksander, B., ed. *Immunology of Ocular Tumors*. Sassenheim, Netherlands: Swets & Zeitlinger Publishers; 131-139, 2002

Roth W, Reed JC. Apoptosis and cancer: when BAX is TRAILing away. *Nat Med* 8, 216-8, 2002

Roth W, Stenner-Liewen F, Pawlowski K, Godzik A, Reed JC. Identification and characterization of DEDD2, a death effector domain-containing protein. *J Biol Chem* 277, 7501-8, 2002

Roth W, Weller M. Death ligand/death receptor-mediated apoptosis in malignant glioma. In: Liau LM BD, Cloughsey TF, Bigner DD, ed. *Brain Tumor Immunotherapy*. Totowa, NJ, USA: Humana Press; 327-344, 2001

Roth W, Wagenknecht B, Klumpp A, Naumann U, Hahne M, Tschopp J, Weller M. APRIL, a

new member of the tumor necrosis factor family, modulates death ligand-induced apoptosis. *Cell Death Differ* 8, 403-10, 2001

Roth W, Isenmann S, Nakamura M, Platten M, Wick W, Kleihues P, Bahr M, Ohgaki H, Ashkenazi A, Weller M. Soluble decoy receptor 3 is expressed by malignant gliomas and suppresses CD95 ligand-induced apoptosis and chemotaxis. *Cancer Res* 61, 2759-65, 2001

Roth W, Wild-Bode C, Platten M, Grimmel C, Melkonyan HS, Dichgans J, Weller M. Secreted Frizzled-related proteins inhibit motility and promote growth of human malignant glioma cells. *Oncogene* 19, 4210-20, 2000

Roth W, Grimmel C, Rieger L, Strik H, Takayama S, Krajewski S, Dichgans J, Reed JC, Weller M. *Bag-1* and *Bcl-2* gene transfer in malignant glioma: Modulation of cell cycle regulation and apoptosis. *Brain Pathol* 10, 223-234, 2000

Roth W, Bähr M, Weller M. Death ligands/death receptors (CD95/DR4/5): new weapons against malignant glioma. *Neuroforum* 3, 87-92, 1999

Roth W, Weller M. Chemotherapy and immunotherapy of malignant glioma: molecular mechanisms and clinical perspectives. *Cell Mol Life Sci* 56, 481-506, 1999

Roth W, Isenmann S, Naumann U, Kugler S, Bahr M, Dichgans J, Ashkenazi A, Weller M. Locoregional Apo2L/TRAIL eradicates intracranial human malignant glioma xenografts in athymic mice in the absence of neurotoxicity. *Biochem Biophys Res Commun* 265, 479-483, 1999

Roth W. The CD95/CD95 ligand system - New approaches to the treatment of malignant brain tumors? *Fortschr Med* 116, 52-55, 1998

Roth W, Wagenknecht B, Dichgans J, Weller M. Interferon-alpha enhances CD95L-induced apoptosis of human malignant glioma cells. *J Neuroimmunol* 87, 121-9, 1998

Roth W, Wagenknecht B, Grimmel C, Dichgans J, Weller M. Taxol-mediated augmentation of CD95 ligand-induced apoptosis of human malignant glioma cells. Association with bcl-2 phosphorylation but neither activation of p53 nor G2/M cell cycle arrest. *Br J Cancer* 77, 404-411, 1998

Roth W, Fontana A, Trepel M, Reed JC, Dichgans J, Weller M. Immunochemotherapy of malignant glioma: Synergistic activity of CD95 ligand and chemotherapeutics. *Cancer Immunol Immunother* 44, 55-63, 1997