6. Literaturverzeichnis

Acehan, D., Jiang, X., Morgan, D. G., Heuser, J. E., Wang, X. and Akey, C. W. (2002)
Three-dimensional structure of the apoptosome: implications for assembly, procaspase-9 binding, and activation. Mol Cell, 9: 423-32

Adams, J. M. and Cory, S. (2001)
Life-or-death decisions by the Bcl-2 protein family. Trends Biochem Sci, 26: 61-6

Algeciras-Schimnich, A., Shen, L., Barnhart, B. C., Murmann, A. E., Burkhardt, J. K. and Peter, M. E. (2002)
Molecular ordering of initial signaling events of CD95. Mol Cell Biol, 22: 207-20

Andreesen, R., Modolell, M., Weltzien, H. U., Eibl, H., Common, H. H., Lohr, G. W. and Munder, P. G. (1978)
Selective destruction of human leukemic cells by alkyl-lysophospholipids. Cancer Res, 38: 3894-9

Antonsson, B., Montessuit, S., Sanchez, B. and Martinou, J. C. (2001)
Bax is present as a high molecular weight oligomer/complex in the mitochondrial membrane of apoptotic cells. J Biol Chem, 276: 11615-23

Aragane, Y., Kulms, D., Metze, D., Wilkes, G., Poppelmann, B., Luger, T. A. and Schwarz, T. (1998)
Ultraviolet light induces apoptosis via direct activation of CD95 (Fas/APO-1) independently of its ligand CD95L. J Cell Biol, 140: 171-82

Armstrong, J. S. and Jones, D. P. (2002)
Glutathione depletion enforces the mitochondrial permeability transition and causes cell death in Bcl-2 overexpressing HL60 cells. FASEB J, 16: 1263-5

Arthur, G. and Bittman, R. (1998)
The inhibition of cell signaling pathways by antitumor ether lipids. Biochim Biophys Acta, 1390: 85-102

Ashkenazi, A. (2002)
Targeting death and decoy receptors of the tumour-necrosis factor superfamily, Nat Rev Cancer. 2: 420-30

Ashkenazi, A. and Dixit, V. M. (1998)
Death receptors: signaling and modulation. Science, 281: 1305-8

Assefa, Z., Garmyn, M., Vantieghem, A., Declercq, W., Vandenabeele, P., Vandenheede, J. R. and Agostinis, P. (2003)
Ultraviolet B radiation-induced apoptosis in human keratinocytes: cytosolic activation of procaspase-8 and the role of Bcl-2. FEBS Lett, 540: 125-32

Baburina, I. and Jackowski, S. (1998)
Apoptosis triggered by 1-O-octadecyl-2-O-methyl-rac-glycero-3-phosphocholine is prevented by increased expression of CTP:phosphocholine cytidylyltransferase. J Biol Chem, 273: 2169-73

Bakovic, M., Waite, K. A. and Vance, D. E. (2000)
Functional significance of Sp1, Sp2, and Sp3 transcription factors in regulation of the murine CTP:phosphocholine cytidylyltransferase alpha promoter. J Lipid Res, 41: 583-94

Basanez, G., Nechushtan, A., Drozhinin, O., Chanturiya, A., Choe, E., Tutt, S., Wood, K. A., Hsu, Y., Zimmerberg, J. and Youle, R. J. (1999)
Bax, but not Bcl-xL, decreases the lifetime of planar phospholipid bilayer membranes at subnanomolar concentrations. Proc Natl Acad Sci U S A, 96: 5492-7

Beach, D. H., Holz, G. G., Jr. and Anekwe, G. E. (1979)
Lipids of Leishmania promastigotes, J Parasitol. 65: 201-16

Beltinger, C., Fulda, S., Kammertoens, T., Meyer, E., Uckert, W. and Debatin, K. M. (1999)
Herpes simplex virus thymidine kinase/ganciclovir-induced apoptosis involves ligand-independent death receptor aggregation and activation of caspases. Proc Natl Acad Sci U S A, 96: 8699-704

Berggren, M. I., Gallegos, A., Dressler, L. A., Modest, E. J. and Powis, G. (1993)
Inhibition of the signalling enzyme phosphatidylinositol-3-kinase by antitumor ether lipid analogues. Cancer Res, 53: 4297-302

Berkovic, D. (1998)
Cytotoxic etherphospholipid analogues. Gen Pharmacol, 31: 511-7

Berkovic, D., Bensch, M., Bertram, J., Wille, T., Haase, D., Binder, C. and Fleer, E. A. (2001)
Effects of hexadecylphosphocholine on thrombocytopoiesis. Eur J Cancer, 37: 503-11

Berkovic, D., Berkovic, K., Binder, C., Haase, D. and Fleer, E. A. (2002)
Hexadecylphosphocholine does not influence phospholipase D and sphingomyelinase activity in human leukemia cells. J Exp Ther Oncol, 2: 213-8

Berkovic, D., Goeckenjan, M., Luders, S., Hiddemann, W. and Fleer, E. A. (1996)
Hexadecylphosphocholine inhibits phosphatidylinositol and phosphatidylcholine phospholipase C in human leukemia cells. J Exp Ther Oncol, 1: 302-11

Berkovic, D., Luders, S., Goeckenjan, M., Hiddemann, W. and Fleer, E. A. (1997)
Differential regulation of phospholipase A2 in human leukemia cells by the etherphospholipid analogue hexadecylphosphocholine. Biochem Pharmacol, 53: 1725-33

Bezombes, C., Segui, B., Cuvillier, O., Bruno, A. P., Uro-Coste, E., Gouaze, V., Andrieu-Abadie, N., Carpentier, S., Laurent, G., Salvayre, R., Jaffrezou, J. P. and Levade, T. (2001)
Lysosomal sphingomyelinase is not solicited for apoptosis signaling. FASEB J, 15: 297-9

Birbes, H., El Bawab, S., Hannun, Y. A. and Obeid, L. M. (2001)
Selective hydrolysis of a mitochondrial pool of sphingomyelin induces apoptosis. FASEB J, 15: 2669-79

Bladergroen, B. A., Geelen, M. J., Reddy, A. C., Declercq, P. E. and Van Golde, L. M. (1998)
Channelling of intermediates in the biosynthesis of phosphatidylcholine and phosphatidylethanolamine in mammalian cells. Biochem J, 334 (Pt 3): 511-7

Blagosklonny, M. V. (2000)
Cell death beyond apoptosis. Leukemia, 14: 1502-8

Blatt, N. B. and Glick, G. D. (2001)
Signaling pathways and effector mechanisms pre-programmed cell death. Bioorg Med Chem, 9: 1371-84

Blume-Peytavi, U., Geilen, C. C., Sommer, C., Almond-Roesler, B. and Orfanos, C. E. (1997)
The phospholipid analogue hexadecylphosphocholine (HePC) inhibits proliferation of keloid fibroblasts in vitro and modulates their fibronectin and integrin synthesis. Arch Dermatol Res, 289: 164-9

Boatright, K. M., Renatus, M., Scott, F. L., Sperandio, S., Shin, H., Pedersen, I. M., Ricci, J. E., Edris, W. A., Sutherlin, D. P., Green, D. R. and Salvesen, G. S. (2003)
A unified model for apical caspase activation. Mol Cell, 11: 529-41

Boesen-de Cock, J. G., Tepper, A. D., de Vries, E., van Blitterswijk, W. J. and Borst, L. (1999)
Common regulation of apoptosis signaling induced by CD95 and the DNA-damaging stimuli etoposide and gamma-radiation dowstream from caspase-8 activation. J Biol Chem, 274: 14255-61

Boggs, K., Rock, C. O. and Jackowski, S. (1998)
The antiproliferative effect of hexadecylphosphocholine toward HL60 cells is prevented by exogenous lysophosphatidylcholine. Biochim Biophys Acta, 1389: 1-12

Borner, C. (1996)
Diminished cell proliferation associated with the death-protective activity of Bcl-2. J Biol Chem, 271: 12695-8

Borner, C. (2003)
The Bcl-2 protein family: sensors and checkpoints for life-or-death decisions. Mol Immunol, 39: 615-47

Borner, C., Olivier, R., Martinou, I., Mattmann, C., Tschopp, J. and Martinou, J. C. (1994)
Dissection of functional domains in Bcl-2 alpha by site-directed mutagenesis. Biochem Cell Biol, 72: 463-9

Bosse, D. C., Parker, J. T., Vogler, W. R. and Ades, E. W. (1995)
Selective inhibition of adhesion molecule expression by edelfosine (ET-18-OCH3) on human umbilical vein or microvascular endothelium. Pathobiology, 63: 109-14

Bouillet, P., Metcalf, D., Huang, D. C., Tarlinton, D. M., Kay, T. W., Kontgen, F., Adams, J. M. and Strasser, A. (1999)
Proapoptotic Bcl-2 relative Bim required for certain apoptotic responses, leukocyte homeostasis, and to preclude autoimmunity. Science, 286: 1735-8

Boukamp, P., Petrussevska, R. T., Breitkreutz, D., Hornung, J., Markham, A. and Fusenig, N. E. (1988)
Normal keratinization in a spontaneousley immortalized aneuploid human keratinocyte cell line. J Cell Biol, 106: 761-71

Bredel, W.E. (1994)
The effects of membran-active lipids as experimental anti-tumor compounds. J Lipid Mediators Cell Signaling, 10: 175-177

Breiser, A., Kim, D. J., Fleer, E. A., Damenz, W., Drube, A., Berger, M., Nagel, G. A., Eibl, H. and Unger, C. (1987)
Distribution and metabolism of hexadecylphosphocholine in mice. Lipids, 22: 925-6

Cerretti, D. P., Kozlosky, C. J., Mosley, B., Nelson, N., Van Ness, K., Greenstreet, T. A., March, C. J., Kronheim, S. R., Druck, T. and Cannizzaro, L. A. (1992)
Molecular cloning of the interleukin-1 beta converting enzyme. Science, 256: 97-100

Chang, D. W., Xing, Z., Capacio, V. L., Peter, M. E. and Yang, X. (2003)
Interdimer processing mechanism of procaspase-8 activation. Embo J, 22: 4132-4142

Chang, D. W., Xing, Z., Pan, Y., Algeciras-Schimnich, A., Barnhart, B. C., Yaish-Ohad, S., Peter, M. E. and Yang, X. (2002)
c-FLIP(L) is a dual function regulator for caspase-8 activation and CD95-mediated apoptosis. EMBO J, 21: 3704-14

Chautan, M., Chazal, G., Cecconi, F., Gruss, P. and Golstein, P. (1999)
Interdigital cell death can occur through a necrotic and caspase-independent pathway. Curr Biol, 9: 967-70

Cheng, E. H., Kirsch, D. G., Clem, R. J., Ravi, R., Kastan, M. B., Bedi, A., Ueno, K. and Hardwick, J. M. (1997)
Conversion of Bcl-2 to a Bax-like death effector by caspases. Science, 278: 1966-8

Chinnaiyan, A. M., O'Rourke, K., Lane, B. R. and Dixit, V. M. (1997)
Interaction of CED-4 with CED-3 and CED-9: a molecular framework for cell death. Science, 275: 1122-6

Chou, J. J., Li, H., Salvesen, G. S., Yuan, J. and Wagner, G. (1999)
Solution structure of BID, an intracellular amplifier of apoptotic signaling. Cell, 96: 615-24

Cleary, M. L. (1991)
The bcl-2 gene and protein in malignant lymphomas. Bull Cancer, 78: 187-93

Coletti, D., Silvestroni, L., Naro, F., Molinaro, M., Adamo, S. and Palleschi, S. (2000)
Vesicle-mediated phosphatidylcholine reapposition to the plasma membrane following hormone-induced phospholipase D activation. Exp Cell Res, 256: 94-104

Conus, S., Kaufmann, T., Fellay, I., Otter, I., Rosse, T. and Borner, C. (2000)
Bcl-2 is a monomeric protein: prevention of homodimerization by structural constraints. EMBO J, 19: 1534-44

Cornell, R. B. (1991a)
Regulation of CTP:phosphocholine cytidylyltransferase by lipids. 1. Negative surface charge dependence for activation. Biochemistry, 30: 5873-80

Cornell, R. B. (1991b)
Regulation of CTP:phosphocholine cytidylyltransferase by lipids. 2. Surface curvature, acyl chain length, and lipid-phase dependence for activation. Biochemistry, 30: 5881-8

Costantini, P., Belzacq, A. S., Vieira, H. L., Larochette, N., de Pablo, M. A., Zamzami, N., Susin, S. A., Brenner, C. and Kroemer, G. (2000)
Oxidation of a critical thiol residue of the adenine nucleotide translocator enforces Bcl-2-independent permeability transition pore opening and apoptosis. Oncogene, 19: 307-14

Coulter, C. V., Kelso, G. F., Lin, T. K., Smith, R. A. and Murphy, M. P. (2000)
Mitochondrially targeted antioxidants and thiol reagents. Free Radic Biol Med, 28: 1547-54

Cremesti, A., Paris, F., Grassme, H., Holler, N., Tschopp, J., Fuks, Z., Gulbins, E. and Kolesnick, R. (2001)
Ceramide enables fas to cap and kill. J Biol Chem, 276: 23954-61

Cremesti, A. E., Goni, F. M. and Kolesnick, R. (2002)
Role of sphingomyelinase and ceramide in modulating rafts: do biophysical properties determine biologic outcome? FEBS Lett, 531: 47-53

Cristea, I. M. and Degli Esposti, M. (2004)
Membrane lipids and cell death: an overview. Chem Phys Lipids, 129: 133-60

Croft, S. L., Snowdon, D. and Yardley, V. (1996)
The activities of four anticancer alkyllysophospholipids against Leishmania donovani, Trypanosoma cruzi and Trypanosoma brucei. J Antimicrob Chemother, 38: 1041-7

Crompton, M., Virji, S., Doyle, V., Johnson, N. and Ward, J. M. (1999)
The mitochondrial permeability transition pore. Biochem Soc Symp, 66: 167-79

Crul, M., Rosing, H., de Klerk, G. J., Dubbelman, R., Traiser, M., Reichert, S., Knebel, N. G., Schellens, J. H., Beijnen, J. H. and ten Bokkel Huinink, W. W. (2002)
Phase I and pharmacological study of daily oral administration of perifosine (D-21266) in patients with advanced solid tumours. Eur J Cancer, 38: 1615-21

Cui, Z., Houweling, M., Chen, M. H., Record, M., Chap, H., Vance, D. E. and Terce, F. (1996)
A genetic defect in phosphatidylcholine biosynthesis triggers apoptosis in Chinese hamster ovary cells. J Biol Chem, 271: 14668-71

Cuvillier, O., Mayhew, E., Janoff, A. S. and Spiegel, S. (1999)
Liposomal ET-18-OCH(3) induces cytochrome c-mediated apoptosis independently of CD95 (APO-1/Fas) signaling. Blood, 94: 3583-92

Dagan, A., Wang, C., Fibach, E. and Gatt, S. (2003)
Synthetic, non-natural sphingolipid analogs inhibit the biosynthesis of cellular sphingolipids, elevate ceramide and induce apoptotic cell death. Biochim Biophys Acta, 1633: 161-169

Darzynkiewicz, Z. (1994)
Simultaneous analysis of cellular RNA and DNA content. Methods Cell Biol, 41: 401-20

Datta, S. R., Dudek, H., Tao, X., Masters, S., Fu, H., Gotoh, Y. and Greenberg, M. E. (1997)
Akt phosphorylation of BAD couples survival signals to the cell-intrinsic death machinery. Cell, 91: 231-41

Daum, G. and Vance, J. E. (1997)
Import of lipids into mitochondria. Prog Lipid Res, 36: 103-30

del Peso, L., Gonzalez, V. M., Inohara, N., Ellis, R. E. and Nunez, G. (2000)
Disruption of the CED-9.CED-4 complex by EGL-1 is a critical step for programmed cell death in Caenorhabditis elegans. J Biol Chem, 275: 27205-11

Denecker, G., Vercammen, D., Steemans, M., Vanden Berghe, T., Brouckaert, G., Van Loo, G., Zhivotovsky, B., Fiers, W., Grooten, J., Declercq, W. and Vandenabeele, P. (2001)
Death receptor-induced apoptotic and necrotic cell death: differential role of caspases and mitochondria. Cell Death Differ, 8: 829-40

Detmar, M., Geilen, C. C., Wieder, T., Orfanos, C. E. and Reutter, W. (1994)
Phospholipid analogue hexadecylphosphocholine inhibits proliferation and phosphatidylcholine biosynthesis of human epidermal keratinocytes in vitro. J Invest Dermatol, 102: 490-4

Deuel, H. J. (1951)
In: The Lipids, Their Chemistry and Biochemistry. Chemistryi Intersciemce Publishers, New York, Vol. 1: 405-418

Droin, N., Dubrez, L., Eymin, B., Renvoize, C., Breard, J., Dimanche-Boitrel, M. T. and Solary, E. (1998)
Upregulation of CASP genes in human tumor cells undergoing etoposide-induced apoptosis. Oncogene, 16: 2885-94

Duijsings, D., Houweling, M., Vaandrager, A. B., Mol, J. A. and Teerds, K. J. (2004)
Hexadecylphosphocholine causes rapid cell death in canine mammary tumor cells. Eur J Pharmacol, 502: 158-93

Dummer, R., Roger, J., Vogt, T., Becker, J., Hefner, H., Sindermann, H. and Burg, G. (1992)
Topical application of hexadecylphosphocholine in patients with cutaneous lymphomas. Prog Exp Tumor Res, 34: 160-9

Earnshaw, W. C., Martins, L. M. and Kaufmann, S. H. (1999)
Mammalian caspases: structure, activation, substrates, and functions during apoptosis. Annu Rev Biochem, 68: 383-424

Eberle, J., Fecker, L. F., Bittner, J. U., Orfanos, C. E. and Geilen, C. C. (2002)
Decreased proliferation of human melanoma cell lines caused by antisense RNA ageinst translation factor eIF-4A1. Br J Cancer, 86: 1957-62

Ekert, P. G., Silke, J., Hawkins, C. J., Verhagen, A. M. and Vaux, D. L. (2001)
DIABLO promotes apoptosis by removing MIHA/XIAP from processed caspase 9. J Cell Biol, 152: 483-90

Ellis, R. E., Jacobson, D. M. and Horvitz, H. R. (1991)
Genes required for the engulfment of cell corpses during programmed cell death in Caenorhabditis elegans. Genetics, 129: 79-94

Erdlenbruch, B., Jendrossek, V., Gerriets, A., Vetterlein, F., Eibl, H. and Lakomek, M. (1999)
Erucylphosphocholine: pharmacokinetics, biodistribution and CNS-accumulation in the rat after intravenous administration. Cancer Chemother Pharmacol, 44: 484-90

Erdlenbruch, B., Jendrossek, V., Marx, M., Hunold, A., Eibl, H. and Lakomek, M. (1998)
Antitumor effects of erucylphosphocholine on brain tumor cells in vitro and in vivo. Anticancer Res, 18: 2551-7

Escobar, P., Matu, S., Marques, C. and Croft, S. L. (2002)
Sensitivities of Leishmania species to hexadecylphosphocholine (miltefosine). ET-18-OCH(3) (edelfosine) and amphotericin B. Acta Trop, 81: 151-7

Escobar, P., Yardley, V. and Croft, S. L. (2001)
Activities of hexadecylphosphocholine (miltefosine), AmBisome, and sodium stibogluconate (Pentostam) against Leishmania donovani in immunodeficient scid mice. Antimicrob Agents Chemother, 45: 1872-5

Esko, J. D., Nishijima, M. and Raetz, C. R. (1982)
Animal cells dependent on exogenous phosphatidylcholine for membrane biogenesis. Proc Natl Acad Sci U S A, 79: 1698-702

Esposti, M. D. (2002)
The roles of Bid, Apoptosis. 7: 433-40

Esposti, M. D. (2003)
The mitochondrial battlefield and membrane lipids during cell death signalling. Ital J Biochem, 52: 43-50

Eue, I. (2001)
Growth inhibition of human mammary carcinoma by liposomal hexadecylphosphocholine: Participation of activated macrophages in the antitumor mechanism. Int J Cancer, 92: 426-33

Eue, I. (2002)
Hexadecylphosphocholine selectively upregulates expression of intracellular adhesion molecule-1 and class I major histocompatibility complex antigen in human monocytes. J Exp Ther Oncol, 2: 333-6

Eue, I., Zeisig, R. and Arndt, D. (1995)
Alkylphosphocholine-induced production of nitric oxide and tumor necrosis factor alpha by U 937 cells. J Cancer Res Clin Oncol, 121: 350-6

Exton, J. H. (1994)
Phosphatidylcholine breakdown and signal transduction. Biochim Biophys Acta, 1212: 26-42

Feng, X. H. and Derynck, R. (1996)
Ligand-independent activation of transforming growth factor (TGF) beta signalling pathways by heteromeric cytoplasmic domains of TGF-beta receptors. J Biol Chem, 271: 13123-9

Fernandez-Checa, J. C. (2003)
Redox regulation and signaling lipids in mitochondrial apoptosis. Biochem Biophys Res Commun, 304: 471-9

Ferri, K. F. and Kroemer, G. (2001)
Organelle-specific initiation of cell death pathways. Nat Cell Biol, 3: E255-63

Finnegan, N. M., Curtin, J. F., Prevost, G., Morgan, B. and Cotter, T. G. (2001)
Induction of apoptosis in prostate carcinoma cells by BH3 peptides which inhibit Bak/Bcl-2 interactions. Br J Cancer, 85: 115-21

Fischer, U., Janicke, R. U. and Schulze-Osthoff, K. (2003)
Many cuts to ruin: a comprehensive update of caspase substrates. Cell Death Differ, 10: 76-100

Fu, D., Shi, Z. and Wang, Y. (1999)
Bcl-2 plays a key role instead of mdr1 in the resistance to hexadecylphosphocholine in human epidermoid tumor cell line KB. Cancer Lett, 142: 147-53

Gajate, C., Santos-Beneit, A., Modolell, M. and Mollinedo, F. (1998)
Involvement of c-Jun NH2-terminal kinase activation and c-Jun in the induction of apoptosis by the ether phospholipid 1-O-octadecyl-2-O-methyl-rac-glycero-3-phosphocholine. Mol Pharmacol, 53: 602-12

Gajate, C., Fonteriz, R. I., Cabaner, C., Alvarez-Noves, G., Alvarez-Rodriguez, Y., Modolell, M. and Mollinedo, F. (2000)
Intracellular triggering of Fas, independently of FasL, as a new mechanism of antitumor ether lipid-induced apoptosis. Int J Cancer, 85: 674-82

Gajate, C. and Mollinedo, F. (2001)
The antitumor ether lipid ET-18-OCH(3) induces apoptosis through translocation and capping of Fas/CD95 into membrane rafts in human leukemic cells. Blood, 98: 3860-3

Gajate, C., Del Canto-Janez, E., Acuna, A. U., Amat-Guerri, F., Geijo, E., Santos-Beneit, A., M., Veldman, R. J. and Mollinedo, F. (2004)
Intracellular triggering of Fas aggregation and recruitment of apoptotic molecules into Fas-enriched rafts selective tumor cell apoptosis. J Exp Med, 200: 353-65

Garcia-Ruiz, C., Colell, A., Mari, M., Morales, A., Calvo, M., Enrich, C. and Fernandez-Checa, J. C. (2003)
Defective TNF-alpha-mediated hepatocellular apoptosis and liver damage in acidic sphingomyelinase knockout mice. J Clin Invest, 111: 197-208

Garcia-Ruiz, C., Colell, A., Mari, M., Morales, A. and Fernandez-Checa, J. C. (1997)
Direct effect of ceramide on the mitochondrial electron transport chain leads to generation of reactive oxygen species. Role of mitochondrial glutathione. J Biol Chem, 272: 11369-77

Geilen, C. C., Barz, S. and Bektas, M. (2001)
Sphingolipid signaling in epidermal homeostasis. Current knowledge and new therapeutic approaches in dermatology, Skin Pharmacol Appl Skin Physiol. 14: 261-71

Geilen, C. C., Haase, A., Wieder, T., Arndt, D., Zeisig, R. and Reutter, W. (1994)
Phospholipid analogues: side chain- and polar head group-dependent effects on phosphatidylcholine biosynthesis. J Lipid Res, 35: 625-32

Geilen, C. C., Wieder, T. and Reutter, W. (1992a)
Hexadecylphosphocholine inhibits translocation of CTP:choline-phosphate cytidylyltransferase in Madin-Darby canine kidney cells. J Biol Chem, 267: 6719-24

Geilen, C. C., Samson, A., Wieder, T., Wild, H. and Reutter, W., (1992b)
Synthesis of of Hexadecylphospho [methyl- ^{14}C]-choline. J Labelled Comp Radiopharm, 31: 1071-76

Geilen, C. C., Bektas, M., Wieder, T., Kodelja, V., Goerdt, S. and Orfanos, C. E. (1997)
1alpha,25-dihydroxyvitamin D3 induces sphingomyelin hydrolysis in HaCaT cells via tumor necrosis factor alpha. J Biol Chem, 271: 8997-9001

Georgieva, M. C., Konstantinov, S. M., Topashka-Ancheva, M. and Berger, M. R. (2002)
Combination effects of alkylphosphocholines and gemcitabine in malignant and normal hematopoietic cells. Cancer Lett, 182: 163-74

Ghosh, A., Akech, J., Mukherjee, S. and Das, S. K. (2002)
Differential expression of cholinephosphotransferase in normal and cancerous human mammary epithelial cells. Biochem Biophys Res Commun. 297: 1043-8

Giard, D. J., Aaronson, S. A., Todaro, G. J., Kersey, J. H., Dosik, H. and Parks, W. P. (1973)
In vitro cultivation of human tumors: establishment of cell lines derived from a series of solid tumors. J Natl Cancer Inst, 51: 1417-23

Gillies, R. J., Didier, N. and Denton, M. (1986)
Determination of cell number in monolayer cultures. Anal Biochem, 159: 109-13

Gougeon, M. L. (2003)
Apoptosis as an HIV strategy to escape immune attack. Nat Rev Immunol, 3: 392-404

Grassme, H., Gulbins, E., Brenner, B., Ferlinz, K., Sandhoff, K., Harzer, K., Lang, F. and Meyer, T. F. (1997)
Acidic sphingomyelinase mediates entry of N. gonorrhoeae into nonphagocytic cells. Cell, 91: 605-15

Grassme, H., Jendrossek, V., Bock, J., Riehle, A. and Gulbins, E. (2002)
Ceramide-rich membrane rafts mediate CD40 clustering. J Immunol, 168: 298-307

Green, D. R. and Evan, G. I. (2002)
A matter of life and death, Cancer Cell. 1: 19-30

Gulbins, E. and Grassme, H. (2002)
Ceramide and cell death receptor clustering. Biochem Biophys Acta, 1585: 139-45

Häcker, G. (2000)
The morphology of apoptosis. Cell Tissue Res, 301: 5-17

Hannun, Y. A. (1996)
Functions of ceramide in coordinating cellular responses to stress. Science, 274: 1855-9

Hanson, P. K., Malone, l., Birchmore, J. L. and Nichols, J. W. (2003)
Lem3p is essential for uptake and potency of alkylphosphocholine drugs, edelfosine and miltefosine. J Biol Chem, 278: 36041-50

Hayashi, T. and Faustman, D. L. (2003)
Role of defective apoptosis in type 1 diabetes and other autoimmune diseases. Recent Prog Horm Res, 58: 131-53

Heiskanen, K. M., Bhat, M. B., Wang, H. W., Ma, J. and Nieminen, A. L. (1999)
Mitochondrial depolarization accompanies cytochrome c release during apoptosis in PC6 cells. J Biol Chem, 274: 5654-8

Henneberry, A. L., Wistow, G. and McMaster, C. R. (2000)
Cloning, genomic organization, and characterization of a human cholinephosphotransferase. J Biol Chem, 275: 29808-15

Henneberry, A. L., Wright, M. M. and McMaster, C. R. (2002)
The major sites of cellular phospholipid synthesis and molecular determinants of Fatty Acid and lipid head group specificity. Mol Biol Cell, 13: 3148-61

Hennino, A., Berard, M., Krammer, P. H. and Defrance, T. (2001)
FLICE-inhibitory protein is a key regulator of germinal center B cell apoptosis. J Exp Med, 193: 447-58

Hohlbaum, A. M., Moe, S. and Marshak-Rothstein, A. (2000)
Opposing effects of transmembrane and soluble Fas ligand expression on inflammation and tumor cell survival. J Exp Med, 191: 1209-20

Holler, N., Zaru, R., Micheau, O., Thome, M., Attinger, A., Valitutti, S., Bodmer, J. L., Schneider, P., Seed, B. and Tschopp, J. (2000)
Fas triggers an alternative, caspase-8-independent cell death pathway using the kinase RIP as effector molecule. Nat Immunol, 1: 489-95

Holmes-McNary, M. Q., Loy, R., Mar, M. H., Albright, C. D. and Zeisel, S. H. (1997)
Apoptosis is induced by choline deficiency in fetal brain and in PC12 cells. Brain Res Dev Brain Res, 101: 9-16

Holopainen, J. M., Angelova, M. I. and Kinnunen, P. K. (2000)
Vectorial budding of vesicles by asymmetrical enzymatic formation of ceramide in giant liposomes. Biophys J, 78: 830-8

Holzmann, B., Lehmann, J. M., Ziegler-Heitbrock, H. W., Funke, I., Riethmüller, G. and Johnson, J. P. (1988)
Glycoprotein P3.58, associated with tumor progression in malignant melanoma. is a novel leukocyte activation antigen, Int J Cancer, 41: 542-547

Hsu, Y. T. and Youle, R. J. (1997)
Nonionic detergents induce dimerization among members of the Bcl-2 family. J Biol Chem, 272: 13829-34

Hu, S., Vincenz, C., Ni, J., Gentz, R. and Dixit, V. M. (1997)
I-FLICE, a novel inhibitor of tumor necrosis factor receptor-1- and CD-95-induced apoptosis. J Biol Chem, 272: 17255-7

Hu, W. H., Johnson, H. and Shu, H. B. (2000)
Activation of NF-kappaB by FADD, Casper, and caspase-8. J Biol Chem, 275: 10838-44

Huang, D. C., Cory, S. and Strasser, A. (1997)
Bcl-2, Bcl-XL and adenovirus protein E1B19kD are functionally equivalent in their ability to inhibit cell death. Oncogene, 14: 405-14

Ikonen, E. (2001)
Roles of lipid rafts in membrane transport. Curr Opin Cell Biol, 13: 470-7

Ishidate, K. (1997)
Choline/ethanolamine kinase from mammalian tissues. Biochim Biophys Acta, 1348: 70-8

Jaattela, M. (2002)
Programmed cell death: many ways for cells to die decently. Ann Med, 34: 480-8

Jackowski, S. (1996)
Cell cycle regulation of membrane phospholipid metabolism. J Biol Chem, 271: 20219-22

Jacobson, K., Sheets, E. D. and Simson, R. (1995)
Revisiting the fluid mosaic model of membranes. Science, 268: 1441-2

Jamil, H., Hatch, G. M. and Vance, D. E. (1993)
Evidence that binding of CTP:phosphocholine cytidylyltransferase to membranes in rat hepatocytes is modulated by the ratio of bilayer- to non-bilayer-forming lipids. Biochem J, 291 (Pt 2): 419-27

Jansen, B., Wacheck, V., Heere-Ress, E., Schlagbauer-Wadl, H., Hoeller, C., Lucas, T., Hoermann, M., Hollenstein, U., Wolff, K. and Pehamberger, H. (2000)
Chemosensitisation of malignant melanoma by BCL2 antisense therapy. Lancet, 356: 1728-33

Jansen, S. M., Groener, J. E., Bax, W., Suter, A., Saftig, P., Somerharju, P. and Poorthuis, B. J. (2001)
Biosynthesis of phosphatidylcholine from a phosphocholine precursor pool derived from the late endosomal/lysosomal degradation of sphingomyelin. J Biol Chem, 276: 18722-7

Jelinek, A. and Klocking, H. P. (1998)
In vitro toxicity of surfactants in U937 cells: cell membrane integrity and mitochondrial function. Exp Toxicol Pathol, 50: 472-6

Jendrossek, V., Kugler W., Erdlenbruch, B., Eibel, B. and Lakomek, M. (2001)
Induction of differentation and tertaploidy by long-term treatment of C6 glioma cells with erucylphosphochline. Int J Oncol, 19: 673-80

Jendrossek, V., Muller, I., Eibl, H. and Belka, C. (2003)
Intracellular mediators of erucylphosphocholine-induced apoptosis. Oncogene, 22: 2621-31

Jha, T. K., Sundar, S., Thakur, C. P., Bachmann, P., Karbwang, J., Fischer, C., Voss, A. and Berman, J. (1999)
Miltefosine, an oral agent, for the treatment of Indian visceral leishmaniasis. N Engl J Med, 341: 1795-800

Jimenez-Lopez, J. M., Carrasco, M. P., Segovia, J. L. and Marco, C. (2002)
Hexadecylphosphocholine inhibits phosphatidylcholine biosynthesis and the proliferation of HepG2 cells. Eur J Biochem, 269: 4649-55

Johnson D. E. (2000)
Noncaspase proteases in apoptosis. Leukemia, 14: 1695-703

Junghahn, I., Bergmann, J., Langen, P., Thun, I., Vollgraf, C. and Brachwitz, H. (1995)
Effect of ALP analogs on inositol trisphosphate formation in H184 mammary epithelial cells before and after transfection with v-erb B oncogene. Anticancer Res, 15: 449-54

Kanduc, D., Mittelman, A., Serpico, R., Sinigaglia, E., Sinha, A. A., Natale, C., Santacroce, R., Di Corcia, M. G., Lucchese, A., Dini, L., Pani, P., Santacroce, S., Simone, S., Bucci, R. and Farber, E. (2002)
Cell death: apoptosis versus necrosis (review). Int J Oncol, 21: 165-70

Karim, M., Jackson, P. and Jackowski, S. (2003)
Gene structure, expression and identification of a new CTP:phosphocholine cytidylyltransferase beta isoform. Biochim Biophys Acta, 1633: 1-12

Kataoka, T., Budd, R. C., Holler, N., Thome, M., Martinon, F., Irmler, M., Burns, K., Hahne, M., Kennedy, N., Kovacsovics, M. and Tschopp, J. (2000)
The caspase-8 inhibitor FLIP promotes activation of NF-kappaB and Erk signaling pathways. Curr Biol, 10: 640-8

Kaufmann-Kolle, P., Drevs, J., Berger, M. R., Kotting, J., Marschner, N., Unger, C. and Eibl, H. (1994)
Pharmacokinetic behavior and antineoplastic activity of liposomal hexadecylphosphocholine. Cancer Chemother Pharmacol, 34: 393-8

Kaufmann-Kolle, P., Berger, M. R., Unger, C. and Eibl. H. (1996)
Systemic administration of alkylphosphocholines. Erucylphosphocholine and liposomal hexadecylphosphocholine. Adv Exp Med Biol, 416: 165-8

Kennedy, E. P. (1956)
The biological synthesis of phospholipids. Can J Med Sci, 34: 334-48

Kent, C. (1990)
Regulation of phosphatidylcholine biosynthesis. Prog Lipid Res, 29: 87-105

Kim, J. S., He, L., Qian, T. and Lemasters, J. J. (2003)
Role of the mitochondrial permeability transition in apoptotic and necrotic death after ischemia/reperfusion injury to hepatocytes. Curr Mol Med, 3: 527-35

Kirchhoff, S., Muller, W. W., Krueger, A., Schmitz, I. and Krammer, P. H. (2000)
TCR-mediated up-regulation of c-FLIPshort correlates with resistance toward CD95-mediated apoptosis by blocking death-inducing signaling complex activity. J Immunol, 165: 6293-300

Kirsch, D. G., Doseff, A., Chau, B. N., Lim, D. S., de Souza-Pinto, N. C., Hansford, R., Kastan, M. B., Lazebnik, Y. A. and Hardwick, J. M. (1999)
Caspase-3-dependent cleavage of Bcl-2 promotes release of cytochrome c. J Biol Chem, 274: 21155-61

Kiss, Z. (1999)
Regulation of mitogenesis by water-soluble phospholipid intermediates. Cell Signal, 11: 149-57

Knight, R. A. (2002)
The archaeology of apoptosis. Cell Death Differ, 9: 1-2

Kötting, J., Marschner, N. W., Meumüller, W., Unger, C. and Eibel, H. (1992)
Hexadecylphosphocholine and octadecyl-methyl-glycero-3-phosphocholine: a comparison of hemolytic aactivity, serum binding and tissue distribution. Prog Exp Tumor Res, 34: 131-42

Kolesnick, R. and Hannun, Y. A. (1999)
Ceramide and apoptosis. Trends Biochem Sci, 24: 224-5;

Kolesnick, R. N., Goni, F. M. and Alonso, A. (2000)
Compartmentalization of ceramide signaling: physical foundations and biological effects. J Cell Physiol, 184: 285-300

Korsmeyer, S. J., Wei, M. C., Saito, M., Weiler, S., Oh, K. J. and Schlesinger, P. H. (2000)
Pro-apoptotic cascade activates BID, which oligomerizes BAK or BAX into pores that result in the release of cytochrome c. Cell Death Differ, 7: 1166-73

Krajewska, M., Wang, H. G., Krajewski, S., Zapata, J. M., Shabaik, A., Gascoyne, R. and Reed, J. C. (1997)
Immunohistochemical analysis of in vivo patterns of expression of CPP32 (Caspase-3), a cell death protease. Cancer Res, 57: 1605-13

Krug, H. F., Oberle, C., Matzke, A. and Massing, U., (2003)
The antiproliferative alkylphospholipid S-1-O-phosphocholine-2-N-acetyl-octadecane induces apoptosis in leukemia cell lines. Ann N Y Acad Sci, 1010: 355-8

Kugler, W., Erdlenbruch, B., Junemann, A., Heinemann, D., Eibl, H. and Lakomek, M. (2002)
Erucylphosphocholine-induced apoptosis in glioma cells: involvement of death receptor signalling and caspase activation. J Neurochem, 82: 1160-70

Kuida, K., Haydar, T. F., Kuan, C. Y., Gu, Y., Taya, C., Karasuyama, H., Su, M. S., Rakic, P. and Flavell, R. A. (1998)
Reduced apoptosis and cytochrome c-mediated caspase activation in mice lacking caspase 9. Cell, 94: 325-37

Laemmli, U. K. (1970)
Cleavage of structural proteins during assembly of the head of bacteriophage T4. Nature, 227: 680-85

Lee, N., Bertholet, S., Debrabant, A., Muller, J., Duncan, R. and Nakhasi, H. L. (2002)
Programmed cell death in the unicellular protozoan parasite Leishmania. Cell Death Differ, 9: 53-64

Lehman, T. A., Modali, R., Boukamp, P., Stanek, J., Bennett, W. P., Welsh, J. A., Metcalf, R. A., Stampfer, M. R., Fusenig, N. and Rogan, E. M. (1993)
p53 mutations in human immortalized epithelial cell lines. Carcinogenesis, 14: 833-9

Lemasters, J. J., Qian, T., He, L., Kim, J. S., Elmore, S. P., Cascio, W.E. and Brenner, D. A. (2002)
Role of mitochondrial inner membrane permeabilization in necrotic cell death, apoptosis, and autophagy. Antioxid Redox Signal, 4: 769-81

Leonard, R., Hardy, J., van Tienhoven, G., Houston, S., Simmonds, P., David, M. and Mansi, J. (2001)
Randomized, double-blind, placebo-controlled, multicenter trial of 6% miltefosine solution, a topical chemotherapy in cutaneous metastases from breast cancer. J Clin Oncol, 19: 4150-9

Levade, T. and Jaffrezou, J. P. (1999)
Signalling sphingomyelinases: which, where, how and why? Biochim Biophys Acta, 1438: 1-17

Lockshin, A., Giovanella, B. C., De Ipolyi, P. D., Williams, L. J., Mendoza, J. T., Yim, S. O. and Stehlin, J. S. (1985)
Exceptional lethality for nude mice of cells derived from primary human melanoma. Cancer Res, 45: 345-50

Locksley, R. M., Killeen, N. and Lenardo, M. J. (2001)
The TNF and TNF receptor superfamilies: integrating mammalian biology. Cell, 104: 487-501

Lonardoni, M. V., Russo, M. and Jancar, S. (2000)
Essential role of platelet-activating factor in control of Leishmania (Leishmania) amazonensis infection. Infect Immun, 68: 6355-61

Los, M., Burek, C. J., Stroh, C., Benedyk, K., Hug, H. and Mackiewicz, A. (2003)
Anticancer drugs of tomorrow: apoptotic pathways as targets for drug design. Drug Discov Today, 8: 67-77

Losonczi, J. A., Olejniczak, E.T., Betz, S.F., Harlan, J. E., Mack, J. and Fesik, S. W. (2000)
NMR studies of the anti-apoptotic protein Bcl-x_L in micelles. Biochemistry, 39: 11024-33

Lowry, O. H., Rosebrough, N. J., Farr, A. L. and Rnadall, R. J. (1951)
Protein measurement with the Folin phenol reagent. J Biol Chem, 193: 265-75

Luo, X., Budihardjo, I., Zou, H., Slaughter, C. and Wang, X. (1998)
Bid, a Bcl2 interacting protein, mediates cytochrome c release from mitochondria in response to activation of cell surface death receptors. Cell, 94: 481-90

Lux, H., Heise, N., Klenner, T., Hart, D. and Opperdoes, F. R. (2000)
Ether--lipid (alkyl-phospholipid) metabolism and the mechanism of action of ether--lipid analogues in Leishmania. Mol Biochem Parasitol, 111: 1-14

Lykidis, A., Baburina, I. and Jackowski, S. (1999)
Distribution of CTP:phosphocholine cytidylyltransferase (CCT) isoforms. Identification of a new CCTbeta splice variant. J Biol Chem, 274: 26992-7001

Martin, S. J. and Green, D. R. (1995)
Protease activation during apoptosis: death by a thousand cuts ? Cell, 82: 349-52

Matsko, C. M., Hunter, O. C., Rabinowich, H., lotze, M. T. and Amoscato, A. A. (2001)
Mitochondrial lipid alterations during Fas- and radiation-induced apoptosis. Biochem Biophys Res Commun, 287: 1112-20

Matzke, A., Massing, U. and Krug, H. F. (2001)
Killing tumour cells by alkylphosphocholines: evidence for involvement of CD95. Eur J Cell Biol, 80: 1-10

McConville, M. J. and Ferguson, M. A. (1993)
The structure, biosynthesis and function of glycosylated phosphatidylinositols in the parasitic protozoa and higher eukaryotes. Biochem J, 294 (Pt 2): 305-24

McMaster, C. R. and Bell, R. M. (1994)
Phosphatidylcholine biosynthesis in Saccharomyces cerevisiae. Regulatory insights from studies employing null and chimeric sn-1,2-diacylglycerol choline- and ethanolaminephosphotransferases. J Biol Chem, 269: 28010-6

Merrill, A. H., Liotta, D. C. and Riley, R. T. (1996)
Fumonisins: fungal toxins that shed light on sphingolipid function. Trends Cell Biol, 6: 218-23

Mollinedo, F., Fernandez-Luna, J. L., Gajate, C., Martin-Martin, B., Benito, A., Martinez-Dalmau, R. and Modolell, M. (1997)
Selective induction of apoptosis in cancer cells by the ether lipid ET-18-OCH3 (Edelfosine): molecular structure requirements, cellular uptake, and protection by Bcl-2 and Bcl-X(L). Cancer Res, 57: 1320-8

Müller, C., Bektas, M., and Geilen, C. C. (2003)
Differential involvement of ceramide in TNFalpha-mediated activation of NF-kappaB in primary human keratinocytes and HaCaT keratinocytes. Cell Mol Biol, 49: 399-407

Müller-Wieprecht, V., Riebeling, C., Stoss, A., Orfanos, C. E. and Geilen, C. C. (2000)
Bcl-2 transfected HaCaT keratinocytes resist apoptotic signals of ceramides, tumor necrosis factor alpha and 1 alpha, 25-dihydroxyvitamin D(3). Arch Dermatol Res, 292: 455-62

Murray, H. W. and Delph-Etienne, S. (2000)
Visceral leishmanicidal activity of hexadecylphosphocholine (miltefosine) in mice deficient in T cells and activated macrophage microbicidal mechanisms. J Infect Dis, 181: 795-9

Murray, H. W., Jungbluth, A., Ritter, E., Montelibano, C. and Marino, M. W. (2000)
Visceral leishmaniasis in mice devoid of tumor necrosis factor and response to treatment. Infect Immun, 68: 6289-93

Muschiol, C., Berger, M. R., Schuler, B., Scherf, H. R., Garzon, F. T., Zeller, W. J., Unger, C., Eibl, H. J. and Schmahl, D. (1987)
Alkyl phosphocholines: toxicity and anticancer properties. Lipids, 22: 930-4

Nakashima, T., Miura, M. and Hara, M. (2000)
Tetrocarcin A inhibits mitochondrial functions of Bcl-2 and suppresses its anti-apoptotic activity. Cancer Res, 60: 1229-35

Naumann, U., Wischhusen, J., Weit, S., Rieger, J., Wolburg, H., Massing, U. and Weller M. (2004)
Alkylphosphocholine-induced glioma cell death is Bcl-X_L-sensitive, caspase-independent and characterized by massive cytoplasmatic vacuole formation. Cell Death Differ, 11: 1326-41

Nigro, J. M., Baker, S. J., Preisinger, A. C., Jessup, J. M., Hostetter, R., Cleary, K., Bigner, S. H., Davidson, N., Baylin, S. and Devilee, P. (1989)
Mutations in the p53 gene occur in diverse human tumour types. Nature, 342: 705-8

Nichols, B. J. and Lippincott-Schwartz J. (2001)
Endocytosis without clathrin coats. Trends Cell Biol, 11: 406-12

Northwood, I. C., Tong, A. H., Crawford, B., Drobnies, A. E. and Cornell, R. B. (1999)
Shuttling of CTP:Phosphocholine cytidylyltransferase between the nucleus and endoplasmic reticulum accompanies the wave of phosphatidylcholine synthesis during the G(0) --> G(1) transition. J Biol Chem, 274: 26240-8

Obeid, L. M., Linardic, C. M., Karolak, L. A. and Hannun, Y. A. (1993)
Programmed cell death induced by ceramide. Science, 259: 1769-71

O´Conner, L., Strasser, A., O´Reilly, L. A. Hausmann, G., Adams, J. M., Cory, S. and Huang, D .C. (1998)
Bim: a novel member of the Bcl-2 family that promotes apoptosis. EMBO J, 15: 384-95

Okazaki, T., Bell, R. M. and Hannun, Y. A. (1989)
Sphingomyelin turnover induced by vitamin D3 in HL-60 cells. Role in cell differentiation. J Biol Chem, 264: 19076-80

Papoff, G., Hausler, P., Eramo, A., Pagano, M. G., Di Leve, G., Signore, A. and Ruberti, G. (1999)
Identification and characterization of a ligand-independent oligomerization domain in the extracellular region of the CD95 death receptor. J Biol Chem, 274: 38241-50

Paris, C., Loiseau, P. M., Bories, C. and Bréard, J. (2004)
Miltefosine induces apoptosis-like death in Leishmania donovani promastigotes. Antimicrob Agents Chemother, 48: 852-859

Parkes, J. G. and Thompson, W. (1973)
Synthesis in vivo of phospholipids of liver mitochondria and endoplasmatic reticulum from glycerol and fatty acids. Biochim Biophys Acta, 306: 403-11

Parone, P. A., James, D. and Martinou, J. C. (2002)
Mitochondria: regulating the inevitable. Biochimie, 84: 105-11

Pastorino, J. G., Tafani, M., Rothman, R. J., Marcinkeviciute, A., Hoek, J. B., Farber, J. L. and Marcineviciute, A. (1999)
Functional consequences of the sustained or transient activation by Bax of the mitochondrial permeability transition pore. J Biol Chem, 274: 31734-9

Patel, V., Lahusen, T., Sy, T., Sausville, E. A., Gutkind, J. S. and Senderowicz, A. M. (2002)
Perifosine, a novel alkylphospholipid, induces p21(WAF1) expression in squamous carcinoma cells through a p53-independent pathway, leading to loss in cyclin-dependent kinase activity and cell cycle arrest. Cancer Res, 62: 1401-9

Pelech, S. L. and Vance, D. E. (1984)
Regulation of phosphatidylcholine biosynthesis. Biochim Biophys Acta, 779: 217-51

Perez-Victoria, F. J., Gamarro, F., Ouellette, M. and Castanys, S. (2003)
Functional cloning of the miltefosine transporter. A novel P-type phospholipid translocase from Leishmania involved in drug resistance. J Biol Chem, 278: 49965-71

Peter, M. E. and Krammer, P. H. (2003)
The CD95(APO-1/Fas) DISC and beyond. Cell Death Differ, 10: 26-35

Petros, A. M., Medek, A., Nettesheim, D. G., Kim, D. H., Yoon, H. S., Swift, K., Matayoshi, E. D., Oltersdorf, T. and Fesik, S. W. (2001)
Solution structure of the antiapoptotic protein bcl-2. Proc Natl Acad Sci U S A, 98: 3012-7

Petros, A. M., Nettesheim, D. G., Wang, Y., Olejniczak, E. T., Meadows, R. P., Mack, J., Swift, K., Matayoshi, E. D., Zhang, H., Thompson, C. B. and Fesik, S. W. (2000)
Rationale for Bcl-xL/Bad peptide complex formation from structure, mutagenesis, and biophysical studies. Protein Sci, 9: 2528-34

Pettus, B. J., Chalfant, C. E. and Hannun, Y. A. (2002)
Ceramide in apoptosis: an overview and current perspectives. Biochim Biophys Acta, 1585: 114-25

Pietenpol, J. A., Papadopoulos, N., Markowitz, S., Willson, J. K., Kinzler, K. W. and Vogelstein, B. (1994)
Paradoxical inhibition of solid tumor cell growth by bcl2. Cancer Res, 54: 3714-7

Pike, L. J. (2003)
Lipid rafts: bringing order to chaos. J Lipid Res, 44: 655-67

Planting, A. S., Stoter, G. and Verweij, J. (1993)
Phase II study of daily oral miltefosine (hexadecylphosphocholine) in advanced colorectal cancer. Eur J Cancer, 29A: 518-9

Pronk, L. C., Planting, A. S., Oosterom, R., Drogendijk, T. E., Stoter, G. and Verweij, J. (1994)
Increases in leucocyte and platelet counts induced by the alkyl phospholipid hexadecylphosphocholine. Eur J Cancer, 30A: 1019-22

Proskuryakov, S. Y., Konoplyannikov, A. G. and Gabai, V. L. (2003)
Necrosis: a specific form of programmed cell death? Exp Cell Res, 283: 1-16

Putcha, G. V., Moulder, K. L., Golden, J. P., Bouillet, P., Adams, J. A., Strasser, A. and Johnson, E. M. (2001)
Induction of BIM, a proapoptotic BH3-only BCL-2 family member, is critical for neuronal apoptosis. Neuron, 29: 615-28

Puthalakath, H., Huang, D. C., O'Reilly, L. A., King, S. M. and Strasser, A. (1999)
The proapoptotic activity of the Bcl-2 family member Bim is regulated by interaction with the dynein motor complex. Mol Cell, 3: 287-96

Puthalakath, H. and Strasser, A. (2002)
Keeping killers on a tight leash: transcriptional and post-translational control of the pro-apoptotic activity of BH3-only proteins. Cell Death Differ, 9: 505-12

Puthalakath, H., Villunger, A., O'Reilly, L. A., Beaumont, J. G., Coultas, L., Cheney, R. E., Huang, D. C. and Strasser, A. (2001)
Bmf: a proapoptotic BH3-only protein regulated by interaction with the myosin V actin motor complex, activated by anoikis. Science, 293: 1829-32

Raisova, M., Hossini, A. M., Eberle, J., Riebeling, C., Wieder, T., Sturm, I., Daniel, P. T., Orfanos, C. E. and Geilen C. C. (2001)
The Bax/Bcl-2 ratio determines the susceptibility of human melanoma cells to CD95/Fas-mediated apoptosis. J Invest Dermatol, 117: 333-40

Raisova, M., Goltz, G., Bektas, M., Bielawska, A., Riebeling, C., Hossini, A. M., Eberle, J., Hannun, Y. A., Orfanos, C. E. and Geilen, C. C. (2002)
Bcl-2 overexpression prevents apoptosis induced by ceramidase inhibitors in malignant melanoma and HaCaT keratinocytes. FEBS Lett, 516: 47-52

Rakotomanga, M., Loiseau, P. M. and Saint-Pierre-Chazalet, M. (2004)
Hexadecylphosphocholine interaction with lipid monoplayers. Biochim Biophys Acta, 1661: 212-8

Rakowska, M., Jasinska, R., Lenart, J., Komanska, I., Makowski, P., Dygas, A. and Pikula, S. (1997)
Membrane integrity and phospholipid movement influence the base exchange reaction in rat liver microsomes. Mol Cell Biochem, 168: 163-76

Ramos, B., Lahti, J. M., Claro, E. and Jackowski, S. (2003)
Prevalence of necrosis in C2-ceramide-induced cytotoxicity in NB16 neuroblastoma cells. Mol Pharmacol, 64: 502-11

Rand, J. H. (2000)
The annexinopathies: a new category of disease. Biochim Biophys Acta, 1498: 169-73

Rasola, A. and Geuna, M. (2001)
A flow cytometric assay simultaneously detects independent apoptotic parameters. Cytometry, 45: 151-7

Reed, J. C. (1997)
Double identity for proteins of the Bcl-2 family. Nature, 387: 773-6

Reed, J. C. (1998)
Bcl-2 family proteins. Oncogene, 17: 3225-36

Reed, J. C. (2002)
Apoptosis-based therapies. Nat Rev Drug Discov, 1: 111-21

Riedl, S. J., Fuentes-Prior, P., Renatus, M., Kairies, N., Krapp, S., Huber, R., Salvesen, G. S. and Bode, W. (2001)
Structural basis for the activation of human procaspase-7. Proc Natl Acad Sci U S A, 98: 14790-5

Rodriguez, J. and Lazebnik, Y. (1999)
Caspase-9 and APAF-1 form an active holoenzyme. Genes Dev, 13: 3179-84

Ruiter, G. A., Verheij, M., Zerp, S. F. and van Blitterswijk, W. J. (2001)
Alkyl-lysophospholipids as anticancer agents and enhancers of radiation-induced apoptosis. Int J Radiat Oncol Biol Phys, 49: 415-9

Ruiter, G. A., Zerp, S. F., Bartelink, H., van Blitterswijk, W. J. and Verheij, M. (1999)
Alkyl-lysophospholipids activate the SAPK/JNK pathway and enhance radiation-induced apoptosis. Cancer Res, 59: 2457-63

Ruiter, G., A., Verheij, M., Zerp, S., F., Moolenaar, W., H. and Van Blitterswijk, W., J. (2002)
Submicromolar doses of alkyl-lysophospholipids induce rapid internalization, but not activation, of epidermal growth factor receptor and concomitant MAPK/ERK activation in A431 cells. Int J Cancer, 102: 343-50

Ruiter, G. A., Zerp, S. F., Bartelink, H., Van Blitterswijk, W. J. and Verheij, M. (2003)
Anti-cancer alkyl-lysophospholipids inhibit the phosphatidylinositol 3-kinase-Akt/PKB survival pathway. Anticancer Drugs, 14: 167-73

Samali, A., Zhivotovsky, B., Jones, D., Nagata, S. and Orrenius, S. (1999)
Apoptosis: cell death defined by caspase activation. Cell Death Differ, 6: 495-6

Santa-Rita, R. M., Santos Barbosa, H., Meirelles, M. N. and de Castro, S. L. (2000)
Effect of the alkyl-lysophospholipids on the proliferation and differentiation of Trypanosoma cruzi. Acta Trop, 75: 219-28

Sarin, A., Wu, M. L. and Henkart, P. A. (1996)
Different interleukin-1 beta converting enzyme (ICE) family protease requirements for the apoptotic death of T lymphocytes triggered by diverse stimuli. J Exp Med, 184: 2445-50

Sartorius, U., Schmitz, I. and Krammer, P. H. (2001)
Molecular mechanisms of death-receptor-mediated apoptosis. Chembiochem, 2: 20-9

Sattler, M., Liang, H., Nettesheim, D., Meadows, R. P., Harlan, J. E., Eberstadt, M., Yoon, H. S., Shuker, S. B., Chang, B. S., Minn, A. J., Thompson, C. B. and Fesik, S. W. (1997)
Structure of Bcl-xL-Bak peptide complex: recognition between regulators of apoptosis. Science, 275: 983-6

Sausville, E. A., Elsayed, Y., Monga, M. and Kim, G. (2003)
Signal transduction-directed cancer treatments. Annu Rev Pharmacol Toxicol, 43: 199-231

Schendel, S. L., Montal, M. and Reed, J. C. (1998)
Bcl-2 family proteins as ion-channels. Cell Death Differ, 5: 372-80

Schulze-Osthoff, K., Ferrari, D., Los, M., Wesselborg, S. and Peter, M. E. (1998)
Apoptosis signaling by death receptors. Eur J Biochem, 254: 439-59

Seifert, K., Duchene, M., Wernsdorfer, W. H., Kollaritsch, H., Scheiner, O., Wiedermann, G., Hottkowitz, T. and Eibl, H. (2001)
Effects of miltefosine and other alkylphosphocholines on human intestinal parasite Entamoeba histolytica. Antimicrob Agents Chemother, 45: 1505-10

Shafer, S. H. and Williams, C. L. (2003)
Non-small and small cell lung carcinoma cell lines exhibit cell type-specific sensitivity to edelfosine-induced cell death and different cell line-specific responses to edelfosine treatment. Int J Oncol, 23: 389-400

Sheehan, J. M. and Young, A. R. (2002)
The sunburn cell revisited: an update on mechanistic aspects. Photochem Photobiol Sci, 1: 365-77

Shimizu, S., Eguchi, Y., Kamiike, W., Funahashi, Y., Mignon, A., Lacronique, V., Matsuda, H. and Tsujimoto, Y. (1998)
Bcl-2 prevents apoptotic mitochondrial dysfunction by regulating proton flux. Proc Natl Acad Sci U S A, 95: 1455-9

Shimizu, S., Ide, T., Yanagida, T. and Tsujimoto, Y. (2000)
Electrophysiological study of a novel large pore formed by Bax and the voltage-dependent anion channel that is permeable to cytochrome c. J Biol Chem, 275: 12321-5

Shinoura, N., Yoshida, Y., Nishimura, M., Muramatsu, Y., Asai, A., Kirino, T. and Hamada, H. (1999)
Expression level of Bcl-2 determines anti- or proapoptotic function. Cancer Res, 59: 4119-28

Shirai, T. (1999)
Commentary: oncosis and apoptosis: two faces of necrosis in a new proposal to clear up the confusion regarding cell death. Toxicol Pathol, 27: 495-6

Singer, S. J. and Nicholson, G. L. (1972)
The fluid mosaic model of the structure of cell membranes. Science, 175: 720-31

Siskind, L. J. and Colombini, M. (2000)
The lipids C2- and C16-ceramide form large stable channels. Implications for apoptosis, J Biol Chem, 275: 38640-4

Smith, P. K., Krohn, R. I., Hermanson, G. T., Mallia, A. K., Gartner, F. H., Provenzano, M. D., Fujimoto, E. K., Goecke, N. M., Olson, B. J. and Klenk, D. C. (1985)
Measurement of protein using bicinchoninic acid. Anal Biochem, 150: 76-85

Smorenburg, C. H., Seynaeve, C., Bontenbal, M., Planting, A. S., Sindermann, H. and Verweij, J. (2000)
Phase II study of miltefosine 6% solution as topical treatment of skin metastases in breast cancer patients. Anticancer Drugs, 11: 825-8

Stekar, J., Hilgard, P. and Klenner, T. (1995)
Opposite effect of miltefosine on the antineoplastic activity and haematological toxicity of cyclophosphamide. Eur J Cancer, 31A: 372-4

Suzuki, M., Youle, R. J. and Tjandra, N. (2000)
Structure of Bax: coregulation of dimer formation and intracellular localization. Cell, 103: 645-54

Suzuki, Y., Imai, Y., Nakayama, H., Takahashi, K., Takio, K. and Takahashi, R. (2001)
A serine protease, HtrA2, is released from the mitochondria and interacts with XIAP, inducing cell death. Mol Cell, 8: 613-21

Tamura, T., Ueda, S., Yoshida, M., Matsuzaki, M., Mohri, H. and Okubo, T. (1996)
Interferon-gamma induces Ice gene expression and enhances cellular susceptibility to apoptosis in the U937 leukemia cell line. Biochem Biophys Res Commun, 229: 21-6

Tan, S., Sagara, Y., Liu, Y., Maher, P. and Schubert, D. (1998)
The regulation of reactive oxygen species production during programmed cell death. J Cell Biol, 141: 1423-32

Tepper, A. D., Ruurs, P., Wiedmer, T., Sims, P. J., Borst, J. and van Blitterswijk, W. J. (2000)
Sphingomyelin hydrolysis to ceramide during the execution phase of apoptosis results from phospholipid scrambling and alters cell-surface morphology. J Cell Biol, 150: 155-64

Thakur, C. P., Sinha, P. K., Singh, R. K., Hassan, S. M. and Narain, S. (2000)
Miltefosine in a case of visceral leishmaniasis with HIV co-infection; and rising incidence of this disease in India. Trans R Soc Trop Med Hyg, 94: 696-7

Tijburg, L. B., Geelen, M. J. and van Golde, L. M. (1989)
Regulation of the biosynthesis of triacylglycerol, phosphatidylcholine and phosphatidylethanolamine in the liver. Biochim Biophys Acta, 1004: 1-19

Towbin, H., Staehelin, T. and Gordon, J. (1979)
Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: Procedure and some applications. Proc Natl Acad Sci, 76:4350-354

Trump, B. F., Berezesky, I. K., Chang, S. H. and Phelps, P. C. (1997)
The pathways of cell death: oncosis, apoptosis, and necrosis. Toxicol Pathol, 25: 82-8

Ueda, S., Masutani, H., Nakamura, H., Tanaka, T., Ueno, M. and Yodoi, J. (2002)
Redox control of cell death. Antioxid Redox Signal, 4: 405-14

Unger, C., Damenz, W., Fleer, E. A., Kim, D. J., Breiser, A., Hilgard, P., Engel, J., Nagel, G. and Eibl, H. (1989)
Hexadecylphosphocholine, a new ether lipid analogue. Studies on the antineoplastic activity in vitro and in vivo. Acta Oncol, 28: 213-7

Unger, C. and Eibl, H. (2001)
[Drug development from phospholipids]. Onkologie, 24 Suppl 1: 18-23

Unger, C., Eibl, H., Breiser, A., von Heyden, H. W., Engel, J., Hilgard, P., Sindermann, H., Peukert, M. and Nagel, G. A. (1988)
Hexadecylphosphocholine (D 18506) in the topical treatment of skin metastases: a phase-I trial. Onkologie, 11: 295-6

Unger, C., Peukert, M., Sindermann, H., Hilgard, P., Nagel, G. and Eibl, H. (1990)
Hexadecylphosphocholine in the topical treatment of skin metastases in breast cancer patients. Cancer Treat Rev, 17: 243-6

Van Blitterswijk, W. J., Hilkmann, H. and Storme, G. A. (1987)
Accumulation of an alkyl lysophospholipid in tumor cell membranes affects membrane fluidity and tumor cell invasion. Lipids, 22: 820-3

Van Blitterswijk, W. J., van der Luit, A. H., Caan, W., Verheij, M. and Borst, J. (2001)
Sphingolipids related to apoptosis from point of view of membrane structure and topology. Biochem Soc Trans, 29: 819-24

Van Blitterswijk, W. J., van der Luit, A. H., Veldman, R., J., Verheij, M. and Borst, J. (2003)
Ceramide: second messenger or modulator of membrane structure and dynamics? Biochem J, 369: 199-211

Van Cruchten, S. and Van Den Broeck, W. (2002)
Morphological and biochemical aspects of apoptosis, oncosis and necrosis. Anat Histol Embryol, 31: 214-23

Van der Luit, A. H., Budde, M., Ruurs, P., Verheij, M. and van Blitterswijk, W. J. (2002)
Alkyl-lysophospholipid accumulates in lipid rafts and induces apoptosis via raft-dependent endocytosis and inhibition of phosphatidylcholine synthesis. J Biol Chem, 277: 39541-7

Van der Luit, A. H., Budde, M., Verheij, M. and Blitterswijk, W. J., (2003)
Different mode of internalization of apoptotic alkyl-lysophospholipid and cell-rescuing lysophosphatidylcholine. Biochem J, 374: 747-53

Van Loo, G., Saelens, X., van Gurp, M., MacFarlane, M., Martin, S. J. and Vandenabeele, P. (2002)
The role of mitochondrial factors in apoptosis: a Russian roulette with more than one bullet. Cell Death Differ, 9: 1031-42

Van Meer, G. and Holthuis, J. C. (2000)
Sphingolipid transport in eukaryotic cells. Biochim Biophys Acta, 1486: 145-70

Vehmeyer, K., Kim, D. J., Nagel, G. A., Eibl, H. and Unger, C. (1989)
Effect of ether lipids on mouse granulocyte-macrophage progenitor cells. Cancer Chemother Pharmacol, 24: 58-60

Vehmeyer, K., Scheurich, P., Eibl, H. and Unger, C. (1991)
Hexadecylphosphocholine-mediated enhancement of T-cell responses to interleukin 2. Cell Immunol, 137: 232-8

Veiga, M. P., Arrondo, J. L., Goni, F. M. and Alonso, A. (1999)
Ceramides in phospholipid membranes: effects on bilayer stability and transition to nonlamellar phases. Biophys J, 76: 342-50

Vercammen, D., Brouckaert, G., Denecker, G., Van de Craen, M., Declercq, W., Fiers, W. and Vandenabeele, P. (1998)
Dual signaling of the Fas receptor: initiation of both apoptotic and necrotic cell death pathways. J Exp Med, 188: 919-30

Victor, F. C. and Gottlieb, A. B. (2002)
TNF-alpha and apoptosis: implications for the pathogenesis and treatment of psoriasis. J Drugs Dermatol, 1: 264-75

Vogler, W. R., Berdel, W. E., Olson, A. C., Winton, E. F., Heffner, L. T. and Gordon, D. S. (1992)
Autologous bone marrow transplantation in acute leukemia with marrow purged with alkyl-lysophospholipid. Blood, 80: 1423-9

Vousden, K. H. and Lu, X. (2002)
Live or let die: the cell's response to p53. Nat Rev Cancer, 2: 594-604

Vrablic, A. S., Albright, C. D., Craciunescu, C. N., Salganik, R. I. and Zeisel, S. H. (2001)
Altered mitochondrial function and overgeneration of reactive oxygen species precede the induction of apoptosis by 1-O-octadecyl-2-methyl-rac-glycero-3-phosphocholine in p53-defective hepatocytes. FASEB J, 15: 1739-44

Wagner, B. A., Buettner, G. R., Oberley, L. W. and Burns, C. P. (1998)
Sensitivity of K562 and HL-60 cells to edelfosine, an ether lipid drug, correlates with production of reactive oxygen species. Cancer Res, 58: 2809-16

Walkey, C. J., Yu, L., Agellon, L. B. and Vance, D. E. (1998)
Biochemical and evolutionary significance of phospholipid methylation. J Biol Chem, 273: 27043-6

Walochnik, J., Duchene, M., Seifert, K., Obwaller, A., Hottkowitz, T., Wiedermann, G., Eibl, H. and Aspock, H. (2002)
Cytotoxic activities of alkylphosphocholines against clinical isolates of Acanthamoeba spp. Antimicrob Agents Chemother, 46: 695-701

Wang, H. G., Pathan, N., Ethell, I. M., Krajewski, S., Yamaguchi, Y., Shibasaki, F., McKeon, F., Bobo, T., Franke, T. F. and Reed, J. C. (1999)
Ca2+-induced apoptosis through calcineurin dephosphorylation of BAD. Science, 284: 339-43

Wang, N. S., Unkila, M. T., Reineks, E. Z. and Distelhorst, C. W. (2001)
Transient expression of wild-type or mitochondrially targeted Bcl-2 induces apoptosis, whereas transient expression of endoplasmic reticulum-targeted Bcl-2 is protective against Bax-induced cell death. J Biol Chem, 276: 44117-28

Ward, P. D., Klein, R. R., Troutmann, M. D., Desai, S. and Thakker, D. R. (2002)
Phospholipase C-gamma modulates epithelial tight junction permeability through hyperphosphorylation of tight junction proteins. J Biol Chem, 277: 35760-5

Wassef, M. K., Fioretti, T. B. and Dwyer, D. M. (1985)
Lipid analyses of isolated surface membranes of Leishmania donovani promastigotes. Lipids, 20: 108-15

Waterhouse, N. J., Goldstein, J. C., von Ahsen, O., Schuler, M., Newmeyer, D. D. and Green, D. R. (2001)
Cytochrome c maintains mitochondrial transmembrane potential and ATP generation after outer mitochondrial membrane permeabilization during the apoptotic process. J Cell Biol, 153: 319-28

Wei, M. C., Zong, W. X., Cheng, E. H., Lindsten, T., Panoutsakopoulou, V., Ross, A. J., Roth, K. A., MacGregor, G. R., Thompson, C. B. and Korsmeyer, S. J. (2001)
Proapoptotic BAX and BAK: a requisite gateway to mitochondrial dysfunction and death. Science, 292: 727-30

Weinhold, P. A., Rounsifer, M. E., Charles, L. and Feldman, D. A. (1989)
Characterization of cytosolic forms of CTP: choline-phosphate cytidylyltransferase in lung, isolated alveolar type II cells, A549 cell and Hep G2 cells. Biochim Biophys Acta, 1006: 299-310

Wieder, T., Geilen, C. C., Kolter, T., Sadeghlar, F., Sandhoff, K., Brossmer, R., Ihrig, P., Perry, D., Orfanos, C. E. and Hannun, Y. A. (1997)
Bcl-2 antagonizes apoptotic cell death induced by two new ceramide analogues. FEBS Lett, 411: 260-4

Wieder, T., Orfanos, C. E. and Geilen, C. C. (1998)
Induction of ceramide-mediated apoptosis by the anticancer phospholipid analog, hexadecylphosphocholine. J Biol Chem, 273: 11025-31

Wieder, T., Perlitz, C., Wieprecht, M., Huang, R. T., Geilen, C. C. and Orfanos, C. E. (1995)
Two new sphingomyelin analogues inhibit phosphatidylcholine biosynthesis by decreasing membrane-bound CTP: phosphocholine cytidylyltransferase levels in HaCaT cells. Biochem J, 311 (Pt 3): 873-9

Wieder, T., Zhang, Z., Geilen, C. C., Orfanos, C. E., Giuliano, A. E. and Cabot, M. C. (1996)
The antitumor phospholipid analog, hexadecylphosphocholine, activates cellular phospholipase D. Cancer Lett, 100: 71-9

Wiese, A., Wieder, T., Mickeleit, M., Reinohl, S., Geilen, C. C., Seydel, U. and Reutter, W. (2000)
Structure-dependent effects of glucose-containing analogs of platelet activating factor (PAF) on membrane integrity. Biol Chem, 381: 135-44

Wittenberg, J. and Kornberg, A. (1953)
Choline phosphokinase. J Biol Chem, 202: 431-44

Wu, X. and Deng, Y. (2002)
Bax and BH3-domain-only proteins in p53-mediated apoptosis. Front Biosci, 7: d151-6

Yen, C. L., Mar, M. H. and Zeisel, S. H. (1999)
Choline deficiency-induced apoptosis in PC12 cells is associated with diminished membrane phosphatidylcholine and sphingomyelin, accumulation of ceramide and diacylglycerol, and activation of a caspase. FASEB J, 13: 135-42

Yin, X. M., Wang, K., Gross, A., Zhao, Y., Zinkel, S., Klocke, B., Roth, K. A. and Korsmeyer, S., J. (1999)
Bid-deficient mice are resistant to Fas-induced hepatocelluar apoptosis. Nature, 400: 886-91

Yuan, J., Shaham, S., Ledoux, S., Ellis, H. M. and Horvitz, H. R. (1993)
The C. elegans cell death gene ced-3 encodes a protein similar to mammalian interleukin-1 beta-converting enzyme. Cell, 75: 641-52

Zamzami, N. and Kroemer, G. (2001)
The mitochondrion in apoptosis: how Pandora's box opens. Nat Rev Mol Cell Biol, 2: 67-71

Zamzami, N., Susin, S. A., Marchetti, P., Hirsch, T., Gomez-Monterrey, I., Castedo, M. and Kroemer, G. (1996)
Mitochondrial control of nuclear apoptosis. J Exp Med, 183: 1533-44

Zha, J., Harada, H., Yang, E., Jockel, J. and Korsmeyer, S. J. (1996)
Serine phosphorylation of death agonist BAD in response to survival factor results in binding to 14-3-3 not BCL-X(L). Cell, 87: 619-28

Zhang, P., Liu, B., Jenkins, G. M., Hannun, Y. A. and Obeid, L. M. (1997)
Expression of neutral sphingomyelinase identifies a distinct pool of sphingomyelin involved in apoptosis. J Biol Chem, 272: 9609-12

Zhang, J. H. and Xu, M. (2000)
DNA fragmentation in apoptosis. Cell Res, 10: 205-11

Zhou, X., Lu, X., Richard, C., Xiong, W., Litchfield, D. W., Bittman, R. and Arthur, G. (1996)
1-O-octadecyl-2-O-methyl-glycerophosphocholine inhibits the transduction of growth signals via the MAPK cascade in cultured MCF-7 cells. J Clin Invest, 98: 937-44

Zimmermann, K. C., Bonzon, C. and Green, D. R. (2001)
The machinery of programmed cell death. Pharmacol Ther, 92: 57-70