

REFERENCE

- Adams, J.M. and Cory, S. 1998. The bcl-2 protein family: arbiters of cell survival. *Science* 281:322-1326.
- Adams, J. M. and Cory, S. 2002. Apoptosomes: engines for caspase activation. *Curr. Opin. Cell Biol.* 14:715-720.
- Adams, J.M., Harris, A.W., Strasser, A., Ogilvy, S. and Cory, S. 1999. Transgenic models of lymphoid neoplasia and development of a panhematopoietic vector. *Oncogene* 18:5268-77.
- Alder, M.N., Dames, S. Gaudet, J. And Mango, S.E. 2003. Gene silencing in *Caenorhabditis elegans* by transitive RNA interference. *RNA* 9:25-32.
- Alheim, K. and Bartfai, T. 1998. The interleukin-1 system: Receptors, ligands, and ICE in the brain and their involvement in the fever response. *Ann. NY Acad. Sci.* 840:51-58.
- Amundson, S.A., Myers, T.G., Fornace Jr., A.J. 1998. Roles for p53 in growth arrest and apoptosis: putting on the brakes after genotoxic stress. *Oncogene* 17:3287-3299.
- Anandalakshmi, R., Marathe, R., Ge, X., Herr, Jr., J.M., Mau, C.,Mallory, A., Pruss, G., Bowman, L. and Vance, V.B. 2000. A calmodulin-related protein that suppresses posttranscriptional gene silencing in plants. *Science* 290:142-144.

- Anun, K. 2004. "Detection of Pm-Synthenin and Pm-TCTP proteins in *Penaeus monodon* by Specific Antibodies". Master of Science Thesis, Department of Biotechnology, Faculty of Agro-Indusry, Prince of Songkla University.
- Ashkenazi, A and Dixit, V.M. 1998. Death receptors: signaling and modulation. *Science* 281:1305-1308.
- Bachere, E., Mialhe, E. and Rodriguez, J. 1995. Identification of defense effectors in the haemolymph of crustaceans with particular reference to the shrimp *Penaeus japonicus* (bate) prospects and applications. *Fish Shellfish Immunol.* 5:597-612.
- Bae, J. Leo, C.P., Hsu, S.Y. and Hsueh, A.J.W. 2000. Mcl-1S, a splicing variant of the antiapoptotic Bcl-2 family member Mcl-1, encodes a proapoptotic protein possessing only the BH3 domain. *J. Biol. Chem.* 275:25255-25261.
- Baker, S.J. and Reddy, E.P. 1998. Modulation of life and death by the TNF receptor superfamily. *Oncogene* 17:3261-3270.
- Bangrak, P. 2003. "Molecular Cloning and Expression White Spot Syndrome Virus Induced Proteins of Black Tiger Prawn (*Penaeus monodon*)". Doctor of Philosophy, Department of Biochemistry, Faculty of Science, Prince of Songkla University.
- Bangrak, P., Graidist, P., Chotigeat, W., Supamattaya, K. and Phongdara, A. 2002. A syntenin-like protein with postsynaptic density protein (PDZ) domains produced by black tiger shrimp *Penaeus monodon* in response to white syndrome virus infection. *Dis. Aquat. Org.* 49:19-25.
- Bangrak, P., Graidist, P., Chotigeat, W. and Phongdara, A. 2004. Molecular cloning and expression of a mammalian homologue of a translationally controlled

- tumor protein (TCTP) gene from *Peneaus monodon* shrimp. *J. Biotechnol.* 108:219-226.
- Beil, M., Leser, J., Lutz, M.P., Gukovskaya, A., Seufferlein, T., Lynch, G., Pandol, S.J. and Adler, G. 2002. Caspase 8-mediated cleavage of plectin precedes F-actin breakdown in acinar cells during pancreatitis. *Am. J. Physiol. Gastrointest. Liver. Physiol.* 282:G450-G460.
- Benndorf, R., Nurnberg, P. and Bielka, H. 1988. Growth phase-dependent proteins of the Ehrlich Ascites Tumor analyzed by one- and two-dimensional electrophoresis. *Exp. Cell Res.* 174:130-138.
- Bergmann, A., Agapite, J., McCall, K. and Steller, H. 1998. The *Drosophila* gene hid is a direct molecular target of Ras-dependent survival signaling. *Cell* 95:331-341.
- Bernstein, E., Caudy, A.A., Hammond, S.M. and Hannon, G.J. 2001. Role for a bidentate ribonuclease in the initiation step of RNA interference. *Nature* 409:363-366.
- Bhisutthibhan, J., Pan, X.Q., Hossler, P.A., Walker, D.J., Yowell, C.A., Carlton, J., Dame, J.B. and Meshnick, S.R. 1998. The *Plasmodium falciparum* translationally controlled tumor protein homolog and its reaction with the antimalarial drug artemisinin. *J. Biol. Chem.* 273:16192-16198.
- Bhisutthibhan, J., Philbert, M. A., Fujioka, H., Aikawa, M. and Meshnick, S. R. 1999. The *Plasmodium falciparum* translationally controlled tumour protein: Subcellular localization and calcium binding. *Eur. J. Cell Biol.* 78:665-670.
- Billy, E., Brondani, V., Zhang, H., Muller, U. and Filipowicz, W. 2001. Specific interference with gene expression induced by long, double-stranded RNA in

- mouse embryonal teratocarcinoma cell lines. *Proc. Natl. Acad. Sci. USA.* 98:14428-14433.
- Bini, L., Heid, H., Liberatori, S., Geiger, G., Pallini, V. And Zwilling, R. 1997. Two-dimensional gel electrophoresis of *Caenorhabditis elegans* homogenates and identification of protein spots by microsequencing. *Electrophoresis* 18:557-562.
- Bingle, C.D., Craig, R.W., Swales, B.M., Singleton, V., Zhou, P. and Whyte, M.K.B. 2000. Exon skipping in Mcl-1 results in a Bcl-2 homology domain 3 only gene product that promotes cell death. *J. Biol. Chem.* 275:22136-22146.
- Boehm, H., Benndorf, R., Gaestel, M., Gross, B., Nurnberg, P., Kraft, R., Otto, A. and Bielka, H. 1989. The growth related protein P23 of the Ehrlich ascites tumor: translational control, cloning and primary structure. *Biochem. Int.* 19:277-286.
- Bommer, U.A. and Thiele, B.J. 2004. Molecules in focus: The translationally controlled tumor protein (TCTP). *Int. J. Biochem. Cell Biol.* 36:379-385.
- Bommer, U.A., Borovjagin, A.V., Greagg, M.A., Jeffrey, I.W., Russell, P., Laing, K.G., Lee, M. and Clemens, M.J. 2002. The mRNA of the translationally controlled tumor protein P23/TCTP is a highly structured RNA, which activates the dsRNA-dependent protein kinase PKR. *RNA* 8:478-496.
- Bonnet, C., Perret, E., Dumont, X., Picard, A., Caput, D. and Lenaers, G. 2000. Identification and transcription control of fission yeast genes repressed by an ammonium starvation growth arrest. *Yeast* 16:23-33.
- Bossy-Wetzel, E. and Green, D.R. 1999. Apoptosis: checkpoint at the mitochondrial frontier. *Mutat. Res.* 434:243-251.

- Brachmann, C.B., Jassim, O.W., Wachsmuth, B.D. and Cagan, R.L. 2000. The Drosophila bcl-2 family member dBorg-1 functions in the apoptotic response to UV-irradiation. *Curr. Biol.* 10:547-550.
- Bridge, A.J., Pebernard, S., Ducraux, A., Nicoulaz, A.L. and Iggo, R. 2003. Induction of an interferon response by RNAi vectors in mammalian cells. *Nat. Genet.* 35:8.
- Budihardjo, I., Oliver, H., Lutter, M., Luo, X. and Wang, X. 1999. Biochemical pathways of caspase activation during apoptosis. *Ann. Rev. Cell Dev. Biol.* 15:269-290.
- Bunz, F., Dutriaux, A., Lengauer, C., Waldmann, T., Zhou, S., Brown, J.P. Sedivy, J.M., Kinzler, K.W. and Vogelstein, B. 1998. Requirement for p53 and p21 to sustain G2 arrest after DNA damage. *Science* 282:1497-1501.
- Burton, J.L., Burns, M.E., Gatti, E., Augustine, G.J. and De Camilli, P. 1994. Specific interactions of Msx4 with members of the Rab GTPase subfamily. *EMBO J.* 13:5547-5558.
- Cans, C., Passer, B.J., Shalak, V., Nancy-Portebois, V., Crible, V., Amzallag, N., Allanic, D., Tufino, R., Argentini, M., Moras, D., Fiucci, G., Goud, B., Mirande, M., Amson, R. and Telerman, A. 2003. Translationally controlled tumor protein acts as a guanine nucleotide dissociation inhibitor on the translation elongation factor eEF1A. *Proc Natl. Acad. Sci. USA*. 100:13892-13897.
- Cardone, M.H., Roy, N., Stennicke, H.R., Salvesen, G.S., Franke, T.F., Stanbridge, E., Frisch, S. and Reed, J.C. 1998. Regulation of cell death protease caspase-9 by phosphorylation. *Science* 282:1318-1321.

- Cerretti, D. P. Kozlosky, C.J., Mosley, B., Nelson, N., Van Ness, K., Greenstreet, T.A., March, C.J., Kronheim, S.R., Druck, T., Cannizzaro, L.A., Huebner, K. and Black, R.A. 1992. Molecular cloning of the interleukin-1 β converting enzyme. *Science* 256:97-100.
- Chang, P.S., Lo, C.F., Wang, Y.C. and Kou, G.H. 1996. Detection of white spot syndrome associated baculovirus (WSBV) target organs in the shrimp *Peneaus monodon* by *in situ* hybridization. *Dis. Aquat. Org.* 27:131-139.
- Chao, D. and Korsmeyer, S. 1998. Bcl-2 family: regulators of cell death. *Annu. Rev. Immunol.* 16:395-419.
- Chen, X.F., Chen, C., Wu, D.H., Huai, H. and Chi, X.C. 1997. A new baculovirus of cultured shrimp. *Sci. China Ser. C.* 40:630-635.
- Chen, P., Nordstrom, W., Gish, B. and Abrams, J.M. 1996. Grim, a novel cell death gene in *Drosophila*. *Genes Dev.* 10:1773-1782.
- Chen, E., Proestou, G., Bourbeau, D. and Wang, E. 2000. Rapid up-regulation of peptide elongation factor, EF-1 alpha protein levels is an immediate early event during oxidative stress-induced apoptosis. *Exp. Cell Res.* 259:140-148.
- Chen, P., Rodriguez, A., Erskine, R., Thach, T. and Abrams, J.M. 1998. Dredd, a novel effector of the apoptosis activators reaper, grim, and hid in *Drosophila*. *Dev. Biol.* 201:202-216.
- Chicas, A. and Macino, G. 2001. Characteristics of post-transcriptional gene silencing. *EMBO Rep.* 2:992-996.
- Chitpatima, S.T., Makrides, S., Bandyopadhyay, R. and Brawerman, G. 1988. Nucleotide sequence of a major messenger RNA for a 21 kilodalton peptide

- that is under translational control in mouse tumor cells. *Nucleic Acid Res.* 16:2350.
- Chou, H.Y., Huang, C.Y., Wang, C.H., Chiang, H.C. and Lo, C.F. 1995. Pathogenicity of a baculovirus infection causing white spot syndrome in cultured penaeid shrimp in Taiwan. *Dis. Aquat. Org.* 23:165-173.
- Christich, A., Kauppila, S., Chen, P., Sogame, N., Ho, S.I. and Abrams, J.M. 2002. The damage-responsive Drosophila gene sickle encodes a novel IAP binding protein similar to but distinct from reaper, grim, and hid. *Curr. Biol.* 12:137-140.
- Cogoni, C. 2001. Homology-dependent gene silencing mechanisms in fungi. *Annu. Rev. Microbiol.* 55:381-406.
- Cohen, G.M. 1997. Caspases: The executioners of apoptosis. *Biochem. J.* 326:1-16.
- Cohen, S.N., Chang, A.C.Y. and Hsu, L. 1972. Nonchromosomal antibiotic resistance in bacteria: Genetic transformation of *Escherichia coli* by R-factor DNA. *Proc. Natl. Acad. Sci.* 69:2110-2114.
- Colussi, P.A., Quinn, L.M., Huang, D.C., Coombe, M., Read, S.H., Richardson, H., Kumar, S. 2000. Debcl, a proapoptotic Bcl-2 homologue, is a component of the *Drosophila melanogaster* cell death machinery. *J. Cell Biol.* 148:703-714.
- Cory, S., Huang, D.C. and Adams, J.M. 2003. The Bcl-2 family: roles in cell survival and oncogenesis. *Oncogene* 22:8590-607.
- Cottet, S., Dupraz, P., Hamburger, F., Dolci, W., Jaquet, M. and Thorens, B. 2002. cFLIP protein prevents tumor necrosis factor-alpha-mediated induction of

- caspase-8-dependent apoptosis in insulin-secreting betaTc-Tet cells. *Diabetes*. 51:1805-1814.
- Craig, R.W. 2002. Mcl-1 provides a window on the role of the Bcl-2 family in cell proliferation, differentiation and tumorigenesis. *Leukemia* 16:444-454.
- Croxton, R., Ma, Y., Song, L., Haura, E.B. and Cress, W.B. 2002. Direct repression of the Mcl-1 promoter by E2F1. *Oncogene* 21:1359-1369.
- Cuconati, A., Mukherjee, C., Perez, D. and White, E. 2003. DNA damage response and MCL-1 destruction initiate apoptosis in adenovirus-infected cells. *Genes & Dev.* 17:2922-2932.
- Czauderna, F., Fechtner, M., Dames, S., Aygun, H., Klippel, A., Pronk, G.J., Giese, K. And Kaufmann, J. 2003. Structural variations and stabilizing modifications of synthetic siRNAs in mammalian cells. *Nucleic Acid Res.* 31:2705-2716.
- Dalmay, T., Hamilton, A., Rudd, S., Angell, S., and Baulcombe, D.C. 2000. An RNA-dependent RNA polymerase gene in *Arabidopsis* is required for posttranscriptional gene silencing mediated by a transgene but not by a virus. *Cell* 101:543-553.
- Dalmay, T., Horsefield, R., Braunstein, T.H. and Baulcombe, D.C. 2001. SDE3 encodes an RNA helicase required for post-transcriptional gene silencing in *Arabidopsis*. *EMBO J.* 20:2069-2078.
- Danial, N.N. and Korsmeyer, S.J. 2004. Cell death: Critical control points. *Cell* 116:205-219.
- Derenne, S. Monia, B., Dean, N.M., Taylor, J.K., Rapp, M.-J., Harousseau, J.-L., Bataille, R. and Amiot, M. 2002. Antisense strategy shows that Mcl-1 rather

- than Bcl-2 or Bcl-x(L) is an essential survival protein of human myeloma cells. *Blood* 100:194-199.
- Durand, S., Lightner, D.V., Nunan, L.M., Redman, R.M., Mari, J. and Monami, J.R. 1996. Application of gene probes as diagnostic tools for white spot baculovirus (WSBV) of Penaeid shrimp. *Dis. Aquat. Org.* 27:59-66.
- Dzitoyeva, S., Dimitrijevic, N. and Manev, H. 2001. Intra-abdominal injection of double-stranded RNA into anesthetized adult *Drosophila* trigger RNA interference in the central nervous system. *Mol. Psychiatry*. 6:665-670.
- 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.
- 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.
- Elbashir, S.M., Lendeckel, W. and Tuschl, T. 2001a. RNA interference is mediated by 21- and 22-nucleotide RNAs. The authors demonstrate that synthetic siRNA can initiate RNAi in *Drosophila* embryo extracts. *Genes Dev.* 15:188-200.
- Elbashir, S.M., Harborth, J., Lendeckel, W., Yalcin, A., Weber, K. and Tuschl, T. 2001b. Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells. *Nature* 411:494-498.
- Elbashir, S.M., Harborth, J., Weber, K. and Tuschl, T. 2002. Analysis of gene function in somatic mammalian cells using small interfering RNAs. *Methods* 26:199-213.

- Enari, M., Sakahira, H., Yokoyama, H., Okawa, K., Iwamatsu, A. and Nagata, S. 1998. A caspase-activated DNase that degrades DNA during apoptosis, and its inhibitor ICAD. *Nature* 391:43-50.
- Engelke, D.R. 2004. RNA interference (RNAi): Nuts and Bolts of RNAi technology. USA: DNA Press.
- Fadok, V.A., Bratton, D.L., Rose, D.M., Pearson, A., Ezekowitz, R.A. and Henson, P.M. 2000. A receptor for phosphatidylserine-specific clearance of apoptotic cells. *Nature* 405:85-90.
- Fantuzzi, G., Dinarello, C.A. 1996. The inflammatory response in interleukin-1 beta-deficient mice: Comparison with other cytokinerelated knock-out mice. *J. Leukoc. Biol.* 59:489-493.
- Fattman, C.L., Delach, S.M., Dou, Q.P. and Johnson, D.E. 2001. Sequential two step cleavage of the retinoblastoma protein by caspase-3/-7 during etoposide-induced apoptosis. *Oncogene* 20:2918-2926.
- Fernandes-Alnemri, T., Litwack, G. and Alnemri, E.S. 1994. CPP32, a novel human apoptotic protein with homology to *Caenorhabditis elegans* cell death protein Ced-3 and mammalian interleukin-1 betaconverting enzyme. *J. Biol. Chem.* 269:30761-30764.
- Fire, A., Xu, S., Montgomery, M.K., Kostas, S.A., Driver, S.E. and Mello, C.C. 1998. Potent and specific genetic interference by double-stranded RNA in *Caenorhabditis elegans*. *Nature* 391:806-811.
- Flegel, T.W. 1997. Special topic review, major viral diseases of the black tiger prawn (*Penaeus monodon*) in Thailand. *World J. Microbiol. Biotechnol.* 13:433-442.

- Flegel, T.W. 2001. The shrimp response to viral pathogens. In Browdy CL, Jory DE (eds) The New Wave, Proceedings of the Special Session on Sustainable Shrimp Culture, Aquaculture 2001. The World Aquaculture Society, Baton Rouge, LA USA, p. 190-214.
- Flegel, T.W. and Pasharawipas, T. 1998. Active viral accommodation: a new concept for crustacean response to viral pathogen. In Flegel, T.W. (ed.), *Advances in shrimp biotechnology*. pp. 245-250. National Center for Genetic Engineering and Biotechnology, Bangkok.
- Fraser, A.G. and Evan, G.I. 1997. Identification of a *Drosophila melanogaster* ICE/CED-3-related protease, drICE. *EMBO J.* 16:2805-2813.
- Fujise, K., Zhang, D., Liu, J.L. and Yeh, E.Y.T. 2000. Regulation of apoptosis and cell cycle progression by MCL1. *J. Biol. Chem.* 275:39458-39465.
- Fujita, E., Egashira, J., Urase, K., Kuida, K. and Momoi, T. 2001. Caspase-9 processing by caspase-3 via a feedback amplification loop in vivo. *Cell Death Differ.* 8:335-344.
- Gabriel, A.G. and Felipe, A.V. 2000. Infectious disease in shrimp species with aquaculture potential. *Resent Res. Devl. Microbiology* 4:333-348.
- Gachet, Y., Tournier, S., Lee, M., Lazaris-Karatzas, A., Poulton, T. and Bommer, U.A. 1999. The growth-related, translationally controlled protein P23 has properties of a tubulin binding protein and associates transiently with microtubules during the cell cycle. *J. Cell Sci.* 112:1257-1271.
- Galaviz-Silva, L., Molina-Garza, Z.J., Alcocer-Gonzalez, J.M., Rosales-Encinas, J.L. and Ibarra-Gamez, C. 2004. White spot syndrome virus genetic variants

- detected in Mexico by a new multiplex PCR method. *Aquaculture* 242:53-68.
- Gnanasekar, M., Rao, K. V., Chen, L., Narayanan, R. B., Geetha, M., Scott, A. L., Ramaswamy, K. and Kaliraj, P. 2002. Molecular characterization of a calcium binding translationally controlled tumour protein homologue from the filarial parasites *Brugia malayi* and *Wuchereria bancrofti*. *Mol. Biochem. Parasitol.* 121:107-118.
- Gozani, O., Boyce, M., Yoo, L., Karuman, P. and Yuan, J. 2002. Life and death in paradise. *Nat. Cell Biol.* 4:E159-E162.
- Green, D.R. 1998. Apoptotic pathways: the roads to ruin. *Cell* 94:695-698.
- Green, D.R. and Kroemer, G. 2004. The pathophysiology of mitochondrial cell death. *Science* 305:626-629.
- Green, D.R. and Reed, J.C. 1998. Mitochondria and apoptosis. *Science* 281:1309-1312.
- Grether, M.E., Abrams, J.M., Agapite, J., White, K. and Steller, H. 1995. The head involution defective gene of *Drosophila melanogaster* functions in programmed cell death. *Genes Dev.* 9:1694-1708.
- Griffith, T.S. and Lynch, D.H. 1998. TRAIL: a molecule with multiple receptors and control mechanisms. *Curr. Opin. Immunol.* 10:559-563.
- Gross, B., Gaestel, M., Bohm, H. and Bielka, H. 1989. cDNA sequence coding for a translationally controlled human tumor protein. *Nucleic Acids Res.* 17:8367.
- Gross, A., McDonnell, J.M. and Korsmeyer, S.J. 1999. BCL-2 family members and the mitochondria in apoptosis. *Genes Dev.* 13:1899-1911.

- Gross, A., Yin, X. M., Wang, K., Wei, M. C., Jocleil, J., Milliman, C., Erdjument-Bromage, H., Tempst, P. and Korsmeyer, S. J. 1999. Caspase cleaved BID targets mitochondria and is required for cytochrome c release, while BCL-XL prevents this release but not tumor necrosis factor-R1/Fas death. *J. Biol. Chem.* 274:1156-1163.
- Gukovskaya, A.S., Gukovsky, I., Jung, Y., Mouria, M. and Pandol, S.J. 2002. Cholecystokinin induces caspase activation and mitochondrial dysfunction in pancreatic acinar cells. Roles in cell injury processes of pancreatitis. *J. Biol. Chem.* 277:22595-22604.
- Gumienny, T.L., Brugnera, E., Tosello-Trampont, A.C., Kinchen, J.M., Haney, L.B., Nishiwaki, K., Walk, S.F., Nemergut, M.E., Macara, I.G., Francis, R., Schedl, T., Qin, Y., Van Aelst, L., Hengartner, M.O. and Ravichandran, K.S. 2001. CED-12/ELMO, a novel member of the CrkII/Dock180/Rac pathway, is required for phagocytosis and cell migration. *Cell* 107:27-41.
- Haghighat, N.G. and Rubeu, L. 1992. Purification of novel calcium binding proteins from *Trypanosome brucei* properties of 22-, 24- and 38- kilodalton proteins. *Mol. Biochem. Parasitol.* 51:99-110.
- Hamilton, A.J. and Baulcombe, D.C. 1999. A species of small antisense RNA in posttranscriptional gene silencing in plants. *Science* 286:950-952.
- Hammond, S.M., Bernstein, E., Beach, D. and Hannon, G.J. 2000. An RNA-directed nuclease mediates post-transcriptional gene silencing in *Drosophila* cells. *Nature* 404:293-296.
- Hamon, Y., Broccardo, C., Chambenoit, O., Luciani, M.F., Toti, F., Chaslin, S., Freyssinet, J.M., Devaux, P.F., McNeish, J., Marguet, D. and Chimini, G.

2000. ABC1 promotes engulfment of apoptotic cells and transbilayer redistribution of phosphatidylserine. *Nat. Cell Biol.* 2:399-406.
- Hasuwa, H., Kaseda, K., Einarsdottir, T., Okabe, M. 2002. Small interfering RNA and gene silencing in transgenic mice and rats. *FEBS Lett.* 532:227-230.
- Haupt, S., Berger, M., Goldberg, Z. and Haupt, Y. 2003. Apoptosis-the p53 network. *J. Cell Sci.* 116:4077-4085.
- Hays, R., Wickline, L. and Cagan, R. 2002. Morgue mediates apoptosis in the *Drosophila melanogaster* retina by promoting degradation of DIAP1. *Nat. Cell Biol.* 4:425-431.
- He, N., Qin, Q. and Xu, X. 2005. Differential profile of genes expressed in hemocytes of white spot syndrome virus-resistant shrimp (*Penaeus japonicus*) by combining suppression subtractive hybridization and differential hybridization. *Antivir. Res.* 66:39-45.
- Heldin, C.H., Johnsson, A., Wennergren, S., Wernstedt, C., Betsholtz, C., Westermark, B. 1986. A human osteosarcoma cell line secretes a growth factor structurally related to a homodimer of PDGF A-chains. *Nature* 319:511-514.
- Hengartner, M.O., Ellis, R.E. and Horvitz, H.R. 1992. The *Caenorhabditis elegans* gene ced-9 protects cells from programmed cell death. *Nature* 356:494-499.
- Henning, O., Itami, T., Maeda, M., Kondo, M., Natsukari, Y. and Takahashi, Y. 1998. Analyses of hemolymph immunoparameters in kuruma shrimp infected with penaeid rod-shaped DNA virus. *Fish Pathol.* 33:389-393.

- Hennino, A., Berard, M., Casamayor-Palleja, M., Krammer, P.H. and Defrance, T. 2000. Regulation of the Fas death pathway by CASPASE 8- inhibitory protein in primary human B cells. *J. Immunol.* 165:3023-3030.
- Henshall, D.C., Bonislawski, D.P., Skradski, S.L., Araki, T., Lan, J.Q., Schindler, C.K., Meller, R. and Simon, R.P. 2001. Formation of the Apaf-1/cytochrome c complex precedes activation of caspase-9 during seizure-induced neuronal death. *Cell Death Differ.* 8:1169-1181.
- Hirotani, M., Zhang, Y., Fujita, N., Naito, M. and Tsuruo, T. 1999. NH2-terminal BH4 Domain of Bcl-2 Is Functional for Heterodimerization with Bax and Inhibition of Apoptosis. *J. Biol. Chem.* 274:20415-20420.
- Hoeppner, D.J., Hengartner, M.O. and Schnabel, R. 2001. Engulfment genes cooperate with ced-3 to promote cell death in *Caenorhabditis elegans*. *Nature* 412:202-206.
- Holley, C.L., Olson, M.R., Colon, R.D. and Kornbluth, S. 2002. Reaper eliminates IAP proteins through stimulated IAP degradation and generalized translational inhibition. *Nat. Cell Biol.* 4:439-444.
- Holmblad, T. and Soderhall, K. 1999. Cell adhesion molecules and antioxidative enzymes in a crustacean, possible role in immunity. *Aquaculture* 172:111-123.
- Hose, J.E., Martin, G.G., Nguyen, V.A., Lucas, J. and Rosenstein, T. 1987. Cytochemical features of shrimp hemocytes. *Biol. Bull. (Woods Hole)* 173:178-187.
- Huang, J., Wang, X.H., Song, X.L., Ma, C.S., Zhao, F.X. and Yang, C.H. 1995. Survey on the pathogen and route of transmission of baculoviral

- hypodermal and hematopoietic necrosis in shrimp by ELISA of monoclonal antibody. *Mar. Fish Res.* 16:40-45.
- Huang, Z. 2000. Structural chemistry and therapeutic intervention of protein-protein interaction in immune response, HIV entry and apoptosis. *Pharmacol. Ther.* 86:201-215.
- Huang, C., Zhang, X., Lin, Q., Xu, X., Hu, Z. and Hew, C. 2002. Proteomic analysis of shrimp white spot syndrome viral proteins and characterization of a novel envelope protein vp466. *Mol. Cell. Proteomics.* 1:223-231.
- Hui, H., Dotta, F., Mario, U.D. and Perfetti, R. 2004. Role of caspases in the Regulation of apoptotic paccretic islet beta-cells death. *J. Cell. Physiol.* 200:177-200.
- Hutvagner, G. and Zamore, P.D. 2002. A microRNA in a multiple-turnover RNAi enzyme complex. *Science* 297:2056-2060.
- Igaki, T., Kanuka, H., Inohara, N., Sawamoto, K., Nunez, G., Okano, H. and Miura, M. 2000. Drob-1, a Drosophila member of the Bcl-2/CED-9 family that promotes cell death. *Proc. Natl. Acad. Sci. U. S. A.* 97:662-667.
- Igaki, T., Kanda, H., Yamamoto-Goto, Y., Kanuka, H., Kuranaga, E., Aigaki, T. and Miura, M. 2002. Eiger, a TNF superfamily ligand that triggers the Drosophila JNK pathway. *EMBO J.* 21:3009-3018.
- Igaki, T. and Miura, M. 2004. Role of Bcl-2 family members in invertebrates. *Biochim. Biophys. Acta.* 1644:73-81.
- Inouye, K., Miwa, S., Oseko, N., Nakano, H., Kimura, T., Momoyama, K. and Hiraoka, M. 1994. Mass mortalities of cultured Kuruma shrimp *Penaeus*

- japonicus* in Japan in 1993: electron microscopic evidence of the causative virus. *Fish Pathol.* 29:149-158.
- Jensen, S., Gassama, M.P. and Heidmann, T. 1999. Taming of transposable elements by homology-dependent gene silencing. *Nat. Genet.* 21:209-212.
- Juo, P., Kuo, C.J., Yuan, J. and Blenis, J. 1998. Essential requirement for caspase-8/CASPASE 8 in the initiation of the Fas-induced apoptotic cascade. *Curr. Biol.* 8:1001-1018.
- Kaitpathomchai, W., Boonsaeng, V., Tasanakajon, A., Wongteerasupaya, C., Jitrapakdee, S. and Panyim, S. 2001. A non-stop, single-tube, semi-nested PCR technique for grading the severity of white spot syndrome virus infections in *Penaeus monodon*. *Dis. Aquat. Org.* 5:235-239.
- Kalidas, S. and Smith, D.P. 2002. Novel genomic cDNA hybrids produce effective RNA interference in adult *Drosophila*. *Neuron* 33:177-184.
- Kamath, R. S., Fraser, A. G., Dong, Y., Poulin, G., Durbin, R., Gotta, M., Kanapin, A., Le Bot, N., Moreno, S., Sohrmann, M., Welchman, D. P., Zipperlen, P. and Ahringer, J. 2003. Systematic functional analysis of the *Caenorhabditis elegans* genome using RNAi. *Nature* 421:231-237.
- Kamath, R.S., Martinez-Campos, M., Zipperlen, P., Fraser, A.G. and Ahringer, J. 2001. Effectiveness of specific RNA-mediated interference through ingested double-stranded RNA in *Caenorhabditis elegans*. *Genome Biol.* 2:1-10.
- Kanda, H., Igaki, T., Kanuka, H., Yagi, T. and Miura, M. 2002. Wengen, a member of the *Drosophila* tumor necrosis factor receptor superfamily, is required for Eiger signaling. *J. Biol. Chem.* 277:28372-28375.

- Kanuka, H., Sawamoto, K., Inohara, N., Matsuno, K., Okano, H. and Miura, M. 1999. Control of the cell death pathway by Dapaf-1, a Drosophila Apaf-1/CED-4-related caspase activator. *Mol. Cell.* 4:757-769.
- Kaplowitz, N. 2000. Mechanisms of liver cell injury. *J. Hepatol.* 32:39-47.
- Kasornchandra, J., Boonyaratpalin, S. and Itami, T. 1998. Detection of white spot syndrome in cultured Penaeid shrimp in Asia: microscopic observation and polymerase chain reaction. *Aquaculture* 164:243-251.
- Kauppila, S., Maaty, W.S., Chen, P., Tomar, R.S., Eby, M.T., Chapo, J., Chew, S., Rathore, N., Zachariah, S., Sinha, S.K., Abrams, J.M. and Chaudhary, P.M. 2003. Eiger and its receptor, Wengen, comprise a TNF-like system in Drosophila. *Oncogene* 22:4860-4867.
- Kennerdell, J.R. and Carthew, R.W. 1998. Use of dsRNA-mediated genetic interference to demonstrate that *frizzled* and *frizzled 2* act in the wingless pathway. *Cell* 95:1017-1026.
- Kerr, J.F.F., Wylie, A.H. and Currie, A.R. 1972. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. *Br. J. Cancer*. 26:239-257.
- Ketting, R.F., Haverkamp, T.H., van Luenen, H.G. and Plasterk, R.H. 1999. Mut-7 of *C. elegans*, required for transposon silencing and RNA interference, is a homolog of Werner syndrome helicase and RNaseD. *Cell* 99:133-141.
- Khanobdee, K., Soowannayan, C., Flegel, T.W., Ubol, S., Withyachumnarnkul, B. 2002. Evidence for apoptosis correlated with mortality in the giant black tiger shrimp *Penaeus monodon* infected with yellow head virus. *Dis. Aquat. Org.* 48:79-90.

- Kim, S.J. 1998. Insulin rapidly induces nuclear translocation of PI3-kinase in HepG2 cells. *Biochem. Mol. Biol. Int.* 46:187-196.
- Kim, C.K., Kim, P.K., Sohn, S.G., Sim, D.S., Park, M.A., Heo, M.S. Lee, T.H., Lee, J.D., Jun, H.K. and Jang, K.L. 1998. Development of a polymerase chain reaction (PCR) procedure for the detection of baculovirus associated with white spot syndrome (WSBV) in Penaeid shrimp. *J. Fish Dis.* 21:11-17.
- Kim, M., Jung, Y., Lee, K. and Kim, C. 2000. Identification of calcium binding sites in translationally controlled tumor protein. *Arch. Pharm. Res.* 23:633-636.
- Kimura, T., Yamano, K., Nakano, H., Momoyama, K., Hiraoka, M. and Inouye, K. 1996. Detection of Penaeid rod-shaped DNA virus (PRDV) by PCR. *Fish Pathol.* 31:93-98.
- Kirkin, V., Joos, S. and Zornig, M. 2004. The role of Bcl-2 family members in tumorigenesis. *Biochim. Biophys. Acta.* 1644:229-49.
- Kluck, R.M., Bossy-Wetzel, E., Green, D.R. and Newmeyer, D.D. 1997. The release of cytochrome c from mitochondria: a primary site for bcl-2 regulation of apoptosis. *Science* 275:1132-1136.
- Kozopas, K. M., Yang, T., Buchan, H.L., Zhou, P. and Craig, R.W. 1993. MCL1, a gene expressed in programmed myeloid cell differentiation, has sequence similarity to Bcl2. *Proc. Natl. Acad. Sci. USA.* 90:3516-3520.
- Kothakota, S., Azuma, T., Reinhard, C., Klippel, A., Tang, J., Chu, K., McGarry, T.J., Kirschner, M.W., Koths, K., Kwiatkowski, D.J. and Williams, L.T. 1997. Caspase-3-generated fragment of gelsolin: Effector of morphological change in apoptosis. *Science* 278:294-298.

- Kroemer, G and Reed, J.C. 2000. Mitochondrial control of cell death. *Nat. Med.* 6:513-519.
- Kruidinger, M. and Evan, G.I. 2000. Caspase-8 in apoptosis: The beginning of “the end”? *IUBMB Life.* 50:85-90.
- Kumar, M. and Carmichael, G.G. 1998. Antisense RNA: function and fate of duplex RNA in cells of higher eukaryote. *Microbiol. Mol. Biol. Rev.* 62: 1415-1434.
- Kumar, S. 1999. Mechanisms mediating caspase activation in cell death. *Cell Death Diff.* 6:1060-1066.
- Kurada, P. and White, K. 1998. Ras promotes cell survival in Drosophila by down regulating hid expression. *Cell* 95:319-329.
- Kuranaga, E., Kanuka, H., Igaki, T., Sawamoto, K., Ichijo, H., Okano, H. and Miura, M. 2002. Reaper-mediated inhibition of DIAP1-induced DTRAF1 degradation results in activation of JNK in Drosophila. *Nat. Cell Biol.* 4:705-710.
- Kurreck, J. 2003. Antisense technologies: improvement through novel chemical modification. *FEBS.* 270:1628-1644.
- Laemmli, U.K. 1970. Cleavage of structural protein during assembly of the head of bacteria phageT. *Nature* 227:680-695.
- Ledgerwood, E.C., Pober, J.S. and Bradley, J.R. 1999. Recent advances in the molecular basis of TNF signal transduction. *Lab. Invest.* 79:1041-1050.
- Lee, S.S., Lee, R.Y., Fraser, A.G., Kamath, R.S., Ahringer, J. and Ruvkun, G. 2003. A systematic RNAi screen identifies a critical role for mitochondria in *C. elegans* longevity. *Nat. Genet.* 33:40-48.

- Leu, J.I-Ju, Dumont, P., Hafey, M., Murphy, M.E. and George, D.L. 2004. Mitochondrial p53 activates Bak and causes disruption of a Bak-Mcl-1 complex. *Nature Cell Biol.* 6:443-450.
- Levine, A.J. 1997. p53, the cellular gatekeeper for growth and division. *Cell* 88:323-331.
- Li, F., Zhang, D. and Fujise, K. 2001. Characterization of Fortilin, a novel antiapoptotic protein. *J. Biol. Chem.* 276:47542-47549.
- Lightner, D.V. 1996. *A handbook of shrimp pathology and diagnostic procedures for diseases of cultured penaeid shrimp*. World Aquaculture Society, Baton rouge, Louisiana, USA.
- Lissy, N.A., Davis, P.K., Irwin, M., Kaelin, W.G. and Dowdy, S.F. 2000. A common E2F-1 and p73 pathway mediates cell death induced by TCR activation. *Nature* 407:642-645.
- Liu, Q.A. and Hengartner, M.O. 1998. Candidate adaptor protein CED-6 promotes the engulfment of apoptotic cells in *C. elegans*. *Cell* 93:961-972.
- Lo, C.F., Ho, C.H., Peng, S.E., Chen C.H., Hsu, H.C., Chiu, Y.L., Chang, C.F., Liu, K.F., Su, M.S., Wang, C.H. and Kou, G.H. 1996a. White spot syndrome baculovirus (WSBV) detected in cultured and captured shrimp, craps and other arthropods. *Dis. Aquat. Org.* 27:215-225.
- Lo, C.F., Leu, J.H., Ho, C.H., Chen, C.H., Peng, S.E., Chen, Y.T., Chou, C.M., Yeh, P.Y., Huang, C.J., Chou, H.Y., Wang, C.H. and Kou, G.H. 1996b. Detection of baculovirus associated with white spot syndrome (WSBV) in penaeid shrimps using polymerase chain reaction. *Dis. Aquat. Org.* 25:133-141.

- Loweth, A.C., Williams, G.T., James, R.F., Scarpello, J.H. and Morgan, N.G. 1998. Human islets of Langerhans express Fas ligand and undergo apoptosis in response to interleukin-1beta and Fas ligation. *Diabetes* 47:727-732.
- Lucy, A.P., Guo, H.S., Li, W.X. and Ding, S.W. 2000. Suppression of post-transcriptional gene silencing by a plant viral protein localized in the nucleus. *EMBO J.* 19:1672-1680.
- MacDonald, S.M., Rafnar, T., Langdon, J. and Lichtenstein, L.M. 1995. molecular identification of an IgE-dependent histamine releasing factor. *Science* 269:688-690.
- Majno, G. and Joris, I. 1995. Apoptosis, oncosis, and necrosis. *Am. J. Pathol.* 146:3-15.
- Malinsky, S., Bucheton, A. and Busseau, I. 2000. New insights on homology-dependent silencing of I factor activity by transgenes containing ORF1 in *Drosophila melanogaster*. *Genetics* 156:1147-1155.
- Marks, H., Mennens, M., Vlak, J.M. and van Hulten, M.C.W. 2003. Transcriptional analysis of the white spot syndrome virus major virion protein genes. *J. Gen. Virol.* 84:1517-1523.
- Marsden, V.S., O'Connor, L., O'Reilly, L.A., Silke, J., Metcalf, D., Ekert, P.G., Huang, D.C., Cecconi, F., Kuida, K., Tomaselli, K.J., Roy, S., Nicholson, D.W., Vaux, D.L., Bouillet, P., Adams, J.M. and Strasser, A. 2002. Apoptosis initiated by Bcl-2-regulated caspase activation independently of the cytochrome c/Apaf-1/caspase-9 apoptosome. *Nature* 419:634-637.
- Martin, S.J. 2001. Dealing the CARDs between life and death. *Trends Cell Biol.* 11:188-189.

- Martinez, J., Patkaniowska, A., Urlaub, H., Luhrmann, R. and Tuschl, T. 2002. Single-stranded antisense siRNAs guide target RNA cleavage in RNAi. *Cell* 110:563-574.
- Mayo, M.A., 2002. A summary of taxonomic changes recently approved by ICTV. *Arch. Virol.* 147:1655-1663.
- Mayo, L.D., and Donner, D.B. 2001. A phosphatidylinositol 3-kinase/Akt pathway promotes translocation of Mdm2 from the cytoplasm to the nucleus. *Proc. Natl. Acad. Sci. USA.* 98:11598-11603.
- Meier, R., Alessi, D.R., Cron, P., Andjelkovic, M., and Hemmings, B.A. 1997. Mitogenic activation, phosphorylation, and nuclear translation of protein kinase B^B. *J. Biol. Chem.* 272:30491-30497.
- Michels, J., Johnson, P.W.M. and Packham. 2005. Molecules in focus Mcl-1. *IJBCB.* 37:267-271.
- Michels, J., O'Neil, J.W., Dallman, C.L., Mouzakiti, A., Habens, F., Brimmell, M., Zhang, K.Y.J., Craig, R.W., Marcusson, E.G., Johnson, P.W.M. and Packham, G. 2004. Mcl-1 is required for Akata6 B-lymphoma cell survival and is converted to a cell death molecule by efficient caspase-mediated cleavage. *Oncogene* 23:4818-4827.
- Momoyama, K., Hiraoka, M., Inouye, K., Kimura, T. and Nakano, H. 1995. Diagnostic techniques of the rod-shaped nuclear virus infection in the Kuruma shrimp, *Penaeus japonicus*. *Fish Pathol.* 30:263-269.
- Moreno, E., Yan, M. and Basler, K. 2002. Evolution of TNF signaling mechanisms: JNK-dependent apoptosis triggered by Eiger, the Drosophila homolog of the TNF superfamily. *Curr. Biol.* 12:1263-1268.

- Mulholland, D.J., Cheng, H., Reid, K., Rennie, P.S., and Nelson, C.C. 2002. The androgen receptor can promote β -catenin nuclear translocation independently of adenomatous polyposis coli. *J. Biol. Chem.* 277:17933-17943.
- Mullauer, L., Gruber, P., Sebinger, D., Buch, J., Wohlfart, S. and Chott, A. 2001. Mutations in apoptosis genes: a pathogenetic factor for human disease. *Mutat. Res.* 488:211-231.
- Nadala, E.C.B., Tapay, L.M., Cao, S. and Loh, P.C. 1997. Detection of yellow head virus and Chinese baculovirus in Penaeid shrimp by western blot technique. *J. Virol. Meth.* 69:39-44.
- Nadala, E.C.B. and Loh, P.C. 2000. Dot-blot nitrocellulose enzyme immunoassays for the detection of white-spot virus and yellow-head virus of Penaeid shrimp. *J. Virol. Meth.* 84:175-179.
- Nagata, S. 1999. Fas ligand-induced apoptosis. *Annu. Rev. Genet.* 33:29-55.
- Napoli, C., Lemieux, C. and Jorgensen, R.A. 1990. Introduction of a chimeric chalcone synthase gene into petunia results in reversible co-suppression of homologous genes in trans. *Plant Cell.* 2:279-289.
- Nicholson, D. W. and Thornberry, N. A. 2003. Life and death decisions. *Science* 299:214-215.
- Nielsen, H. V., Johnsen, A. H., Sanchez, J. C., Hochstrasser, D. F. and Schiotz, P. O. 1998. Identification of a basophil leukocyte interleukin-3-regulated protein that is identical to IgE-dependent histamine-releasing factor. *Allergy* 53:642-652.

- Niere, M., Meißlizer, C., Dettloff, M., Christoph, W., Ziegler, M. and Wiesner, A. 1999. Insect immune activation by recombinant *Galleria mellonella* apophorin III. *Biochim. Biophys. Acta.* 1433:16-26.
- Nijhawan, D., Fang, M., Traer, E., Zhong, Q., Ga, W., Du, F. And Wang, X. 2003. Elimination of Mcl-1 is required for the initiation of apoptosis following ultraviolet irradiation. *Genes & Dev.* 17:1475-1486.
- Nunan, L.N. and Lightner, D.V. 1997. Development of a nonradioactive gene probe by PCR for detection of white spot syndrome virus (WSSV). *J. Virol. Meth.* 63:193-201.
- Nunez, G., Benedict, M.A., Hu, Y., Inohara, N. 1998. Caspases: The proteases of the apoptotic pathway. *Oncogene* 17:3237-3245.
- Oelgeschlager, M., Larrain, J., Geissert, D. and De Robertis, E.M. 2000. The evolutionarily conserved BMP-binding protein Twisted gastrulation promotes BMP signalling. *Nature* 405:757-763.
- Oikawa, K., Ohbayashi, T., Mimura, J., Fujii-Kuriyama, Y., Teshima, S., Rokutan, K., Mukai, K. and Kuroda, M. 2002. Dioxin stimulates synthesis and secretion of IgE-dependent histamine-releasing factor. *Biochem. Biophys. Res. Commun.* 290:984-987.
- Okumura, T., Nagai, F., Yamamoto, S., Oomura, H., Inouye, K., Ito, M. and Sawada, H. 2005. Detection of white spot syndrome virus (WSSV) from hemolymph of Penaeid shrimps *Penaeus japonicus* by reverse passive latex agglutination assay using high-density latex particles. *J. Virol. Meth.* 124:143-148.

- Opferman, J. T., Letai, A., Beard, C., Sorcinelli, M.D., Ong, C.C. Korsmeyer, S.J. 2003. Development and maintenance of B and T lymphocytes requires antiapoptotic MCL-1. *Nature* 426:671-676.
- Packham, G. and Stevenso, F.K. 2005. Bodyguards and assassins: Bcl-2 family proteins and apoptosis control in chronic lymphocytic leukaemia. *J. Immunol.* 114:441-449.
- Park, W., Li, J., Song, R., Messing, J. and Chen, X. 2002. CARPEL FACTORY, a dicer homolog, and HEN1, a novel protein, act in microRNA metabolism in *Arabidopsis thaliana*. *Curr. Biol.* 12:1484-1495.
- Parrish, S., Fleenor, J., Xu, S., Mello, C. and Fire, A. 2000. Functional anatomy of a dsRNA trigger: Differential requirement for the two trigger strands in RNA Interference. *Mol. Cell.* 6:1077-1087.
- Pay, A., Heberle-Bors, E. and Hirt, H. 1992. An alfalfa cDNA encodes a protein with homology to translationally controlled human tumor protein. *Plant Mol. Biol.* 19:501-503.
- Pinkoski, M.J. and Green, D.R. 1999. Fas ligand, death gene. *Cell Death Diff.* 6:1174-1181.
- Podlecki, D.A., Smith, R.M., Kao, M., Tsai, P., Huecksteadt, T., Brandenberg, D., Lasher, R. S., Jarett, L., and Olefsky, J. M. 1987. Nuclear translocation of the insulin receptor. A possible mediator of insulin's long term effects. *J. Biol. Chem.* 262:3362-3368.
- Pollard, T.D. and Earnshaw, W.C. 2002. Cell biology. USA: Elsevier Science.
- Polyak, K., Xia, Y., Zweier, J.L., Kinzler, K.W. and Vogelstein, B. 1997. A model for p53-induced apoptosis. *Nature* 389:300-305.

- Ponten, J. and Saksela, E. 1967. Two established in vitro cell lines from human mesenchymal tumours. *Int. J. Cancer.* 2:434-447.
- Potten, C. and Wilson, J. 2004. Apoptosis: The life and death of cells. USA: Cambridge University Press.
- Poulos, B.T., Pantoja, C.R., Bradley-Dunlop, D., Aguilar, J. and Lightner, D.V. 2001. Development and application of monoclonal antibodies for the detection of white spot syndrome virus of Penaeid shrimp. *Dis. Aquat. Org.* 47:13-23.
- Prives, C. and Hall, P.A. 1999. The p53 pathway. *J. Pathol.* 187:112-126.
- Quere, R., Commes, T., Marti, J., Bonami, J.R. and Piquemal, D. 2002. White spot syndrome virus and infectious hypodermal and hematopoietic necrosis virus simultaneous diagnosis by miniarray system with colormetry detection. *J. Virol. Meth.* 105:189-196.
- Raile, K., Hoflich, A., Kessler, U., Yang, Y., Pfuender, M., Blum, W.F., Kolb, H., Schwarz, H.P. and Kiess, W. 1994. Human osteosarcoma (U2OS) cells express both insulin-like growth factor-I (IGF-I) receptors and insulin-like growth factor-II/mannose-6-phosphate (IGF-II/M6P) receptors and synthesize IGF-II: autocrine growth stimulation by IGF-II via the IGF-I receptor. *J. Cell Physiol.* 159:531-541.
- Rao, K. V., Chen, L., Gnanasekar, M. and Ramaswamy, K. 2002. Cloning and characterization of a calcium-binding, histamine-releasing protein from *Schistosoma mansoni*. *J. Biol. Chem.* 277:31207-31213.
- Ratcliff, F.G., MacFarlane, S.A. and Baulcombe, D.C. 1999. Gene silencing without DNA: RNA-mediated cross-protection between viruses. *Plant Cell.* 11:1207-1216.

- Reddien, P.W., Cameron, S. and Horvitz, H.R. 2001. Phagocytosis promotes programmed cell death in *C. elegans*. *Nature* 412:198-202.
- Reddien, P.W. and Horvitz, H.R. 2000. CED-2/CrkII and CED-10/Rac control phagocytosis and cell migration in *Caenorhabditis elegans*. *Nat. Cell Biol.* 2:131-136.
- Reed, J.C. 1998. Bcl-2 family proteins. *Oncogene* 17:3225-3236.
- Riedl, S.J. and Shi, Y. 2004. Molecular mechanisms of caspase regulation during apoptosis. *Nature* 5:897-907.
- Rinkenberger, J.L., Horning, S., Klocke, B., Roth, K. and Korsmeyer, S.J. 2000. Mcl-1 deficiency results in peri-implantation embryonic lethality. *Genes & Dev.* 14:23-27.
- Rodriguez, A., Oliver, H., Zou, H., Chen, P., Wang, X. and Abrams, J.M. 1999. Dark is a Drosophila homologue of Apaf-1/CED-4 and functions in an evolutionarily conserved death pathway. *Nat. Cell Biol.* 1:272-279.
- Rojtinnakorn, J., Hirono, I., Itami, T., Takahashi, Y. and Aoki, T. 2002. Gene expression in haemocytes of kuruma prawn, *Penaeus japonicus*, in response to infection with WSSV by EST approach. *Fish Shellfish Immunol.* 13:69-83.
- Rosenberry, B. 1994. World shrimp farming. Shrimp news international, San Diego, CA, 68 p.
- Rosenberry, B. 1996. World Shrimp Farming. Shrimp News International, San Diego, California, USA, 164 pp.
- Rosenberry, B. 2000. World Shrimp Farming. Shrimp News International, San Diego, California, USA, 324 pp.

- Rosenberry, B. 2002. World Shrimp Farming. Shrimp News International, San Diego, California, USA, 296 pp.
- Rout, N., Citarasu, T., Ravindran, R. and Murugan, V. 2005. Transcriptional and translational expression profile of a white spot syndrome viral (WSSV) gene in different organs of infected shrimp. *Aquaculture*. 245:31-38.
- Ryoo, H.D., Bergmann, A., Gonen, H., Ciechanover, A. and Steller, H. 2002. Regulation of Drosophila IAP1 degradation and apoptosis by reaper and ubcD1. *Nat. Cell Biol.* 4:432-438.
- Sahul-Hameed, A.S., Anilkumar, M., Stephen-Raj, M.L. and Jayaraman, K. 1998. Studies on the pathogenicity of systemic ectodermal and mesodermal baculovirus and its detection in shrimp by immunological methods. *Aquaculture* 160:31-45.
- Sahtoul, A., Hassan, M.D., Shariff, M. 2001. DNA fragmentation, an indicator of apoptosis, in cultured black tiger shrimp *Penaeus monodon* infected with white spot syndrome virus (WSSV). *Dis. Aquat. Org.* 44:155-159.
- Sanchez, J-C., Schaller, D., Ravier, F., Golaz, O., Jaccoud, S., Belet, M., Wilkins, M.R., James, R., Deshusses, J. and Hochstrasser, D. 1997. Translationally controlled tumor protein: A protein identified in several nontumoral cells including erythrocytes. *Electrophoresis* 18:150-155.
- Sathish, S., Selvakkumar, C., Sahul Hameed, A.S. and Narayanan, R.B. 2004. 18-kDa protein as a marker to detect WSSV infection in shrimps. *Aquaculture* 238:39-50.
- Sattler, M., Liang, H., Nettesheim, D., Meadows, R.P., Harlan, J.E., Eberstadt, M., Yoon, H. S., Shuker, S.B., Chang, B.S., Mainn, A.J., Thompson, C.B., and

- Fesik, S.W. 1997. Structure of Bcl-xL-Bak Peptide Complex: Recognition Between Regulators of Apoptosis. *Science* 275:983-986.
- Sato, T., Hanada, M., Bodrug, S., Iwama, N., Boise, L.H., Thompson, C.B., Golemis, E., Fong, L., Wang, H-G., and Reed, J. 1994. Interactions among members of the Bcl-2 protein family analyzed with a yeast two-hybrid system. *Proc. Natl. Acad. Sci. USA*. 91:9238-9242.
- Savill, J. and Fadok, V. 2000. Corpse clearance defines the meaning of cell death. *Nature* 407:784-788.
- Schendel, S.L., Montal, M. and Reed, J.C. 1998. Bcl-2 family proteins as ion-channels. *Cell Death Diff.* 5:372-380.
- Sedlak, T.W., Oltvai, Z.N., Yang, E., Wang, K., Boise, L.H., Thompson, C.B. and Korsmeyer, S.J. 1995. Multiple Bcl-2 family members demonstrate selective dimerization with Bax. *Proc. Natl. Acad. Sci. USA*. 92:7834-7838.
- Seol, D.W., Li, J., Seol, M.H., Park, S.Y., Talanian, R.V., Billiar, T.R. 2001. Signaling events triggered by tumor necrosis factor-related apoptosis-inducing ligand (TRAIL): Caspase-8 is required for TRAIL induced apoptosis. *Cancer. Res.* 61:1138-1143.
- Shi, Y. 2002. Mechanisms of caspase inhibition and activation during apoptosis. *Mol. Cell.* 9:459-470.
- Shinagawa, T. and Ishii, S. 2003. Generation of Ski-knockdown mice by expressing a long double-strand RNA from an RNA polymerase II promoter. *Genes Dev.* 17:1340-1345.
- Shiozaki, E.N., Chai, J. and Shi, Y. 2002. Oligomerization and activation of caspase-9, induced by Apaf-1 CARD. *Proc. Natl. Acad. Sci. USA*. 99:4197-4202.

- Sinha, P., Kohl, S., Fischer, J., Hutter, G., Kern, M., Kottgen, E., Dietel, M., Lage, H., Schnolzer, M. and Schadendorf, D. 2000. Identification of novel proteins associated with the development of chemoresistance in malignant melanoma using two-dimensional electrophoresis. *Electrophoresis* 21:3048-3057.
- Sionov, R.V. and Haupt, Y. 1999. The cellular response to p53: the decision between life and death. *Oncogene* 18:6145-6157.
- Slee, E.A., Adrain, C. and Martin, S.J. 1999. Serial killers: ordering caspase activation events in apoptosis. *Cell Death Diff.* 6:1067-1074.
- Slee, E.A., Adrain, C. and Martin, S.J. 2001. Executioner caspase-3, -6, and -7 perform distinct, non-redundant roles during the demolition phase of apoptosis. *J. Biol. Chem.* 276:7320-7326.
- Soderhall, K. and Cerenius, L. 1992. Crustacean immunity. *Annu. Rev. Fish Dis.* 2:3-23.
- Srinivasula, S.M., Datta, P., Kobayashi, M., Wu, J.W., Fujioka, M., Hegde, R., Zhang, Z., Mukattash, R., Fernandes, A.T., Shi, Y., Jaynes, J.B. and Alnemri, E.S. 2002. Sickle, a novel Drosophila death gene in the reaper/hid/grim region, encodes an IAP-inhibitory protein. *Curr. Biol.* 12:125-130.
- Sritunyalucksana, K., Cerenius, L. and Soderhall, K. 1999. Molecular cloning and characterization of prophenoloxidase in the black tiger shrimp, *Penaeus monodon*. *Dev. Comp. Immunol.* 23:179-186.
- Sritunyalucksana, K., Lee, S.Y. and Soderhall, K. 2002. A β -1,3-glucan binding protein from the black tiger shrimp *Penaeus monodon*. *Dev. Comp. Immunol.* 26:237-245.

- Sritunyalucksana, K., Wongsuebsantati, K., Johansson M.W. and Soderhall, K. 2001. Peroxinectin, a cell adhesive protein associated with the proPO system from the black tiger shrimp, *Penaeus monodon*. *Dev. Comp. Immunol.* 25:353-363.
- Stein, P., Svoboda, P. and Schultz, R.M. 2003. Transgenic RNAi in mouse oocytes: a simple and fast approach to study gene function. *Dev. Biol.* 256:187-193.
- Steller, H. 1995. Mechanisms and genes of cellular suicide. *Science*. 267:1445-1449.
- Stenmark, H., and Olkkonen, V.M. 2001. The Rab GTPase family. *Genome Biol.* 2: reviews3007.
- Su, H.P., Nakada-Tsukui, K., Tosello-Trampont, A.C., Li, Y., Bu, G., Henson, P.M. and Ravichandran, K.S. 2002. Interaction of CED-6/GULP, an adapter protein involved in engulfment of apoptotic cells with CED-1 and CD91/low density lipoprotein receptor-related protein (LRP). *J. Biol. Chem.* 277:11772-11779.
- Supamattaya, K., Hoffmann, R.W., Boonyaratpalin, S. and Kanchanaphum, P. 1998. Experimental transmission of white spot syndrome virus (WSSV) from black tiger shrimp *Penaeus monodon* to the sand crab *Portunus pelagicus*, mud crab *Scylla serrata* and krill *Acetes* sp. *Dis. Aquat. Org.* 32:79-85.
- Susin, S.A., Zamzami, N., Castedo, M., Daugas, E., Wang, H.G., Geley, S., Fassy, F., Reed, J.C. and Kroemer, G. 1997. The central executioner of apoptosis: Multiple connections between protease activation and mitochondria in Fas/APO-1/CD95- and ceramide-induced apoptosis. *J. Exp. Med.* 186:25-37.

- Svoboda, P., Stein, P., Hayashi, H. And Schultz, R.M. 2000. Selective reduction of dormant maternal mRNAs in mouse oocytes by RNA interference. *Development* 127:4147-4156.
- Tabara, H., Sarkissian, M., Kelly, W.G., Fleenor, J., Grishok, A., Timmons, L., Fire, A. and Mello, C.C. 1999. The rde-1 gene, RNA interference, and transposon silencing in *C. elegans*. *Cell* 99:123-132.
- Tapay, L.M., Nadala, E.C.B. and Loh, P.C. 1999. A polymerase chain reaction protocol for the detection of various geographical isolates of white spot virus. *J. Virol. Meth.* 82:39-43.
- Teshima, S., Rokutan, K., Nikawa, T. and Kishi, K. 1998. Macrophage colony-stimulating factor stimulates synthesis and secretion of a mouse homolog of a human IgE-dependent histamine-releasing factor by macrophages in vitro and in vivo. *J. Immunol.* 161:6356-6366.
- Thaw, P., Baxter, N.J., Hounslow, A.M., Price, C., Walther, J.P., and Craven, C.J. 2001. Structure of TCTP reveals unexpected relationship with guanine nucleotide-free chaperones. *Nat. Struct. Biol.* 8:701-704.
- Thiele, H., Berger, M., Lenzner, C., Kuhn, H. and Thiele, B.J., 1998. Structure of the promoter and complete sequence of the gene coding for the rabbit translationally controlled tumour protein (TCTP) P23. *Eur. J. Biochem.* 257:62-68.
- Thiele, H., Berger, M., Skalweit, A. and Thiele, B. J. 2000. Expression of the gene and processed pseudogenes encoding the human and rabbit translationally controlled tumour protein (TCTP). *Eur. J. Biochem.* 267:5473-5481.

- Thomas, G. 1986. Translational control of mRNA expression during the early mitogenic response in Swiss mouse 3T3 cells: identification of specific proteins. *J. Cell Biol.* 103:2137-2144.
- Thomas, G. and Luther, H. 1981. Transcriptional and translational control of cytoplasmic proteins after serum stimulation of quiescent Swiss 3T3 cells. *Proc. Natl. Acad. Sci. USA* 78:5712-5716.
- Thornberry, N. A., Bull, H.G., Calaycay, J.R., Chapman, K.T., Howard, A.D., Kostura, M.J., Miller, D.K., Molineaux, S.M., Weidmer, J.R., Aunins, J., Elliston, K.O., Ayala, J.M., Casano, F.J., chin, J., Ding, G.J.F., Egger, L.A., Gaffney, E.P., Limjuco, G., Palyha, O.C., Raju, S.M., Rolando, A.M., Salley, J.P., Yamin, T.T., Lee, T.D., Shively, J.E., Maccross, M., Mumford, R.A., Schmidt, J.A. and Tocci, M.J. 1992. A novel heterodimeric cysteine protease is required for interleukin-1 β processing in monocytes. *Nature* 356:768-774.
- Thornberry, N.A. and Lazebnik, Y. 1998. Caspases: enemies within. *Science* 281:1312-1316.
- Timmons, L., Court, D.L. and Fire, A. 2001. Ingestion of bacterially expressed dsRNAs can produce specific and potent genetic interference in *Caenorhabditis elegans*. *Gene* 263:103-112.
- Tuschl, T. 2001. RNA interference and small interfering RNAs. *Chembiochem* 2:239-245.
- Tuynder, M., Susini, L., Prieur, S., Besse, S., Fiucci, G., Amson, R., and Telerman, A. 2002. Biological models and genes of tumor reversion: Cellular

- reprogramming through *tpt1*/TCTP and *SIAH-1*. *Proc. Natl. Acad. Sci. USA.* 99:14976-14981.
- Van der Krol, A.R., Mur, L., Beld, M., Mol, J.N.M. and Stuitje, A.R. 1990. Flavonoid genes in petunia: Addition of a limited number of gene copies may lead to a suppression of gene expression. *Plant Cell.* 2:291-299.
- Van Hulten, M.C., Witteveldt, J., Peters, S., Kloosterboer, N., Tarchini, R., Fiers, M., Sandbrink, H., Lankhorst, R.K. and Vlak, J.M. 2001. The white spot syndrome virus DNA genome sequence. *Virology* 286:7-22.
- Vance, V and Vaucheret, H. 2001. RNA silencing in plants-Defense and counterdefense. *Science* 292:2277-2280.
- Vaux, D.L. and Korsmeyer, S.J. 1999. Cell death in development. *Cell* 96:245-254.
- Venegas, C.A., Nonaka, L., Mushiake, K., Nishizawa, T. and Muroga, K. 2000. Quasi-immune response of *Penaeus japonicus* to penaeid rod-shaped DNA virus (PRDV). *Dis. Aquat. Org.* 42:83-89.
- Voinnet, O., Lederer, C. and Baulcombe, D.C. 2000. A viral movement protein prevents spread of the gene silencing signal in *Nicotiana benthamiana*. *Cell* 103:157-167.
- Walker, D. J., Pitsch, J. L., Peng, M. M., Robinson, B. L., Peters, W., Bhisutthibhan, J. and Meshnick, S. R. 2000. Mechanisms of artemisinin resistance in the rodent malaria pathogen *Plasmodium yoelii*. *Antimicrob. Agents Chemother.* 44:344-347.
- Wang, S.L., Hawkins, C.J., Yoo, S.J., Muller, H.A. and Hay, B.A. 1999. The Drosophila caspase inhibitor DIAP1 is essential for cell survival and is negatively regulated by HID. *Cell* 98:453-463.

- Wang, Y.C., Lo, C.F., Chang, P.S. and Kou, G.H. 1998a. Experimental infection of white spot baculovirus in some cultured and wild decapods in Taiwan. *Aquaculture* 164:221-231.
- Wang, Q., Nunan, L.M. and Lightner, D.V. 2000a. Identification of genomic variations among geographic isolates of white spot syndrome virus using restriction analysis and Southern blot hybridization. *Dis. Aquat. Org.* 43:175-181.
- Wang, C.S., Tsai, Y.J. and Chen, S.N. 1998b. Detection of white spot disease virus (WSDV) infection in shrimp using in situ hybridization. *J. Invertebr. Pathol.* 72:170-173.
- Wang, C.H., Yang, C.Y., Lue, C.H., Kou, G.H. and Lo, C.F. 2000b. Ultrastructure of white spot syndrome virus development in primary lymphoid organ cell cultures. *Dis. Aquat. Org.* 41:91-104.
- Weber, C.H. and Vincenz, C. 2001. The death domain superfamily: A tale of two interfaces?. *Trends Biochem. Sci.* 26:475-481.
- Wei, Q., Lipardi, C. and Paterson, B.M. 2003. Analysis of the 3'-hydroxyl group in *Drosophila* siRNA function. *Methods* 30:337-347.
- White, K., Grether, M.E., Abrams, J.M., Young, L., Farrell, K. and Steller, H. 1994. Genetic control of programmed cell death in *Drosophila*. *Science* 264:677-683.
- Wianny, F. and Zemicka-Goetz, M. 2000. Specific interference with gene function by double-stranded RNA in early mouse development. *Nat. Cell Biol.* 2:70-75.

- Wilson, R., Goyal, L., Ditzel, M., Zachariou, A., Baker, D.A., Agapite, J., Steller, H., Meier, P. 2002. The DIAP1 RING finger mediates ubiquitination of Dronc and is indispensable for regulating apoptosis. *Nat. Cell Biol.* 4:445-450.
- Wing, J.P., Karres, J.S., Ogdahl, J.L., Zhou, L., Schwartz, L.M. and Nambu, J.R. 2002a. Drosophila sickle is a novel grim-reaper cell death activator. *Curr. Biol.* 12:131-135.
- Wing, J.P., Schreder, B.A., Yokokura, T., Wang, Y., Andrews, P.S., Huseinovic, N., Dong, C.K., Ogdahl, J.L., Schwartz, L.M., White, K. and Nambu, J.R. 2002b. Drosophila morgue is an F box/ubiquitin conjugase domain protein important for grim-reaper mediated apoptosis. *Nat. Cell Biol.* 4:451-456.
- Wongprasert, K., Khanobdee, K., Glunukarn, S.S., Meeratana, P. and Withyachumnarnkul, B. 2003. Time-course and levels of apoptosis in various tissues of Black tiger shrimp *Penaeus monodon* infected with white-spot syndrome virus. *Dis. Aquat. Org.* 55:3-10.
- Wongteerasupaya, C., Vickers, J.E., Sriurairatana, S., Nash, G.L., Akarajamorn, A., Boonsaeng, V., Panyim S., Tassanakajon, A., Withyachumnarnkul B. and Flegal, T.W. 1995. A non-occluded, systemic baculovirus that occurs in cells of ectodermal and mesodermal origin and causes high mortality in the black tiger prawn *Penaeus monodon*. *Dis. Aquat. Org.* 21:69-77.
- Wongteerasupaya, C., Wongswinsansri, S., Boonsaeng, V., Panyim, S., Pratanipat, P., Nash, G.L., Withyachumnarnkul, B. and Flegel, T.K. 1996. DNA fragment of *Penaeus monodon* baculovirus PmNOBII gives positive in situ hybridization with white-spot viral infections in six Penaeid species. *Aquaculture* 143:23-32.

- Wu, A., Sciacca, L. and Baserga, R. 2003. Nuclear translocation of insulin receptor substrate-1 by the insulin receptor in mouse embryo fibroblasts. *J. Cell. Physiol.* 195:453-460.
- Wu, Y.C., and Horvitz, H.R. 1998a. The *C. elegans* cell corpse engulfment gene ced-7 encodes a protein similar to ABC transporters. *Cell* 93:951-960.
- Wu, Y.C., and Horvitz, H.R. 1998b. *C. elegans* phagocytosis and cell-migration protein CED-5 is similar to human DOCK180. *Nature* 392:501-504.
- Xerri, L., Devilard, E., Bouabdallah, R., Stoppa, A.M., Hassoun, J. and Birg, F. 1999. FADD expression and caspase activation in B-cell lymphomas resistant to Fas-mediated apoptosis. *Br. J. Haematol.* 106:652-661
- Xu, A., Bellamy, A.R. and Taylor, J.A. 1999. Expression of translationally controlled tumour protein is regulated by calcium at both the translational and post-transcriptional level. *Biochem. J.* 342:683-689.
- Yarm, F. R. 2002. Plk phosphorylation regulates the microtubule-stabilizing protein TCTP. *Mol. Cell. Biol.* 22:6209-6221.
- Yang, F., He, J., Lin, X., Li, Q., Pan, D., Zhang, X. and Xu, X. 2001. Complete genome sequence of the shrimp white spot bacilliform virus. *J. Virol.* 75:11811-11820.
- Yang, J., Liu, X., Bhalla, K., Kim, C.N., Ibrado, A.M., Cai, J., Peng, T., Jones, D.P. and Wang, X. 1997. Prevention of apoptosis by bcl-2: release of cytochrome c from mitochondria blocked. *Science* 275:1129-1132.
- Yang, D., Lu, H. and Erickson, J.W. 2000. Evidence that processed small dsRNAs may mediate sequence-specific mRNA degradation during RNAi in *Drosophila* embryos. *Curr. Biol.* 10:1191-1200.

- Yang, T., Kozapas, K.M. and Craig, R.W. 1995. The intracellular distribution and pattern of expression of McI-1 overlap with, but are not identical to, those of Bcl-2. *J. Cell Biol.* 128:1173-1184.
- Yamada, K., Ichikawa, F., Ishiyama-Shigemoto, S., Yuan, X. and Nonaka, K. 1999. Essential role of caspase-3 in apoptosis of mouse beta-cells transfected with human Fas. *Diabetes* 48:478-483.
- Yeh, M.S., Huang, C.J., Leu, J.H., Lee, Y.C. and Tsai, I.H. 1999. Molecular cloning and characterization of a hemolymph clottable protein from tiger shrimp (*Penaeus monodon*). *Eur. J. Biochem.* 266:624-633.
- Yenofsky, R., Bergmann, I and Brawerman, G. 1982. Messenger RNA species partially in a repressed state in mouse sarcoma ascites cells. *Proc. Natl. Acad. Sci. USA.* 79:5876-5880.
- Yenofsky, R., Cereghini, S., Krowezyska, A. and Brawerman, G. 1983. Regulation of mRNA utilization in mouse erythroleukemia cells induced to differentiate by exposure to dimethyl sulfoxide. *Mol. Cell. Biol.* 3:1197-1203.
- Yin, X.M., Oltval, Z.N. and Korsmeyer, S.J. 1994. BH_a and BH₂ domains of bcl-2 are required for inhibition of apoptosis and heterodimerization with Bax. *Nature* 369:321-323.
- Yoganandhan, K., Sathish, S., Murugan, V., Narayanan, R.B. and Sahul Hameed, A.S. 2003. Screening the organs for early detection of white spot syndrome virus in *Peneaus indicus* by histopathology and PCR techniques. *Aquaculture* 215:21-29.
- Yoo, S.J., Huh, J.R., Muro, I., Yu, H., Wang, L., Wang, S.L., Feldman, R.M., Clem, R.J., Muller, H.A. and Hay, B.A. 2002. Hid, Rpr and Grim negatively

- regulate DIAP1 levels through distinct mechanisms. *Nat. Cell Biol.* 4:416-424.
- Yoon, T., Jung, J., Kim, M., Lee, K. M., Choi, E. C. and Lee, K. 2000. Identification of the self-interaction of rat TCTP/IgE-dependent histamine-releasing factor using yeast two-hybrid system. *Arch. Biochem. Biophys.* 384:379-382.
- Zamore, P.D., Tuschl, T., Sharp, P.A. and Bartel, D.P. 2000. RNAi: Double-stranded RNA directs the ATP-dependent cleavage of mRNA at 21 to 23 nucleotide intervals. *Cell* 101:25-33.
- Zapata, J.M., Takahashi, R., Salvesen, G.S. and Reed, J.C. 1998. Granzyme release and caspase activation in activated human T-lymphocytes. *J. Biol. Chem.* 273:6916-6920.
- Zha, H., Aime-Sempe, C., Sato, T. and Reed, J.C. 1996. Proapoptotic protein Bax heterodimerizes with Bcl-2 and homodimerizes with Bax via a novel domain (BH3) distinct from BH1 and BH2. *J. Biol. Chem.* 271:7440-7444.
- Zha, J., Harada, H., Osipov, K., Jockel, J., Waksman, G. and Korsmeyer, S.J. 1997. BH3 Domain of BAD is required for heterodimerization with BCL-XL and pro-apoptotic activity. *J. Biol. Chem.* 272:24101-24104.
- Zhan, Q., Biesczad, C.K., Bae, I., Fornace, A.J.Jr., and Craig, R.W. 1997. Induction of Bcl-2 family member MCL1 as an early response to DNA damage. *Oncogene* 14:1031-1039.
- Zhang, H., Huang, Q., Ke, N., Matsuyama, S., Hammock, B., Godzik, A., Reed, J.C. 2000. Drosophila pro-apoptotic Bcl-2/Bax homologue reveals evolutionary conservation of cell death mechanisms. *J. Biol. Chem.* 275:27303-27306.

- Zhang, D., Li, F., Weidner, D., Mnjayan, Z.H. and Fujise, K. 2002a. Physical and functional interaction between myeloid cell leukemia 1 protein (MCL1) and fortilin. *J. Biol. Chem.* 277:37430-37438.
- Zhang, X., Huang, C., Xu, X. and Hew, C.L. 2002b. Identification and localization of a prawn white spot syndrome virus gene that encodes an envelope protein. *J. Gen. Virol.* 83:1069-1074.
- Zhang, Y., and Xiong, Y. 2001. A p53 Amino-Terminal Nuclear Export Signal Inhibited by DNA Damage-Induced Phosphorylation. *Science* 292:1910-1915.
- Zhou, L., Song, Z., Tittel, J. and Steller, H. 1999. HAC-1, a Drosophila homolog of APAF-1 and CED-4 functions in developmental and radiationinduced apoptosis. *Mol. Cell.* 4:745-755.
- Zhou, Q., Snipas, S., Orth, K., Muzio, M., Dixit, V.M. and Salvesen, G.S. 1997. Target protease specificity of the viral serpin CrmA. Analysis of five caspases. *J. Biol. Chem.* 272:7797-7800.