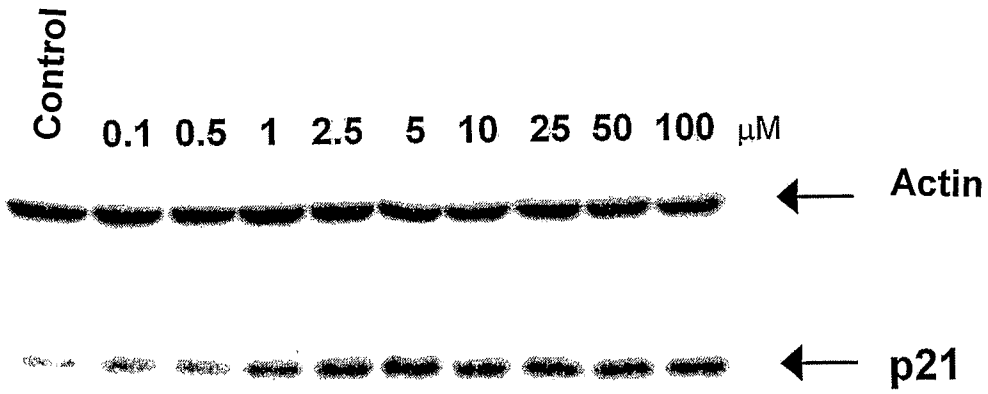

Fig.1: Protein $p21^{WAF-1}$ induction in MCF-7 cells after treatment by different concentrations of 2OH3MeOBAPR.

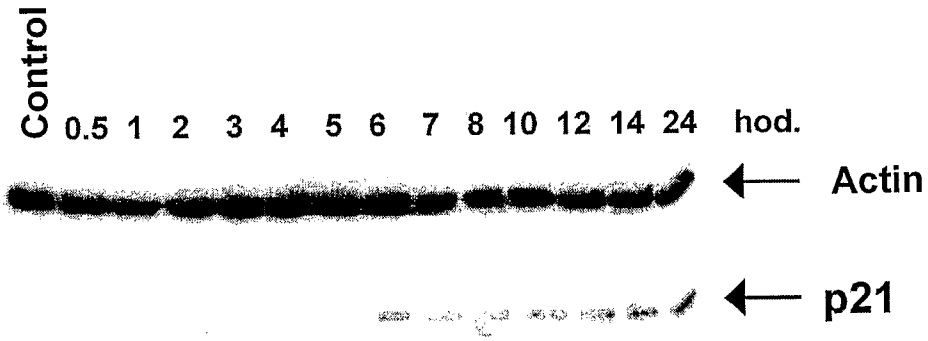

Fig. 2: $p21^{WAF-1}$ induction in MCF-7 cells 6-24 hours after application of 2OH3MeOBAPR in 1 μM concentration.

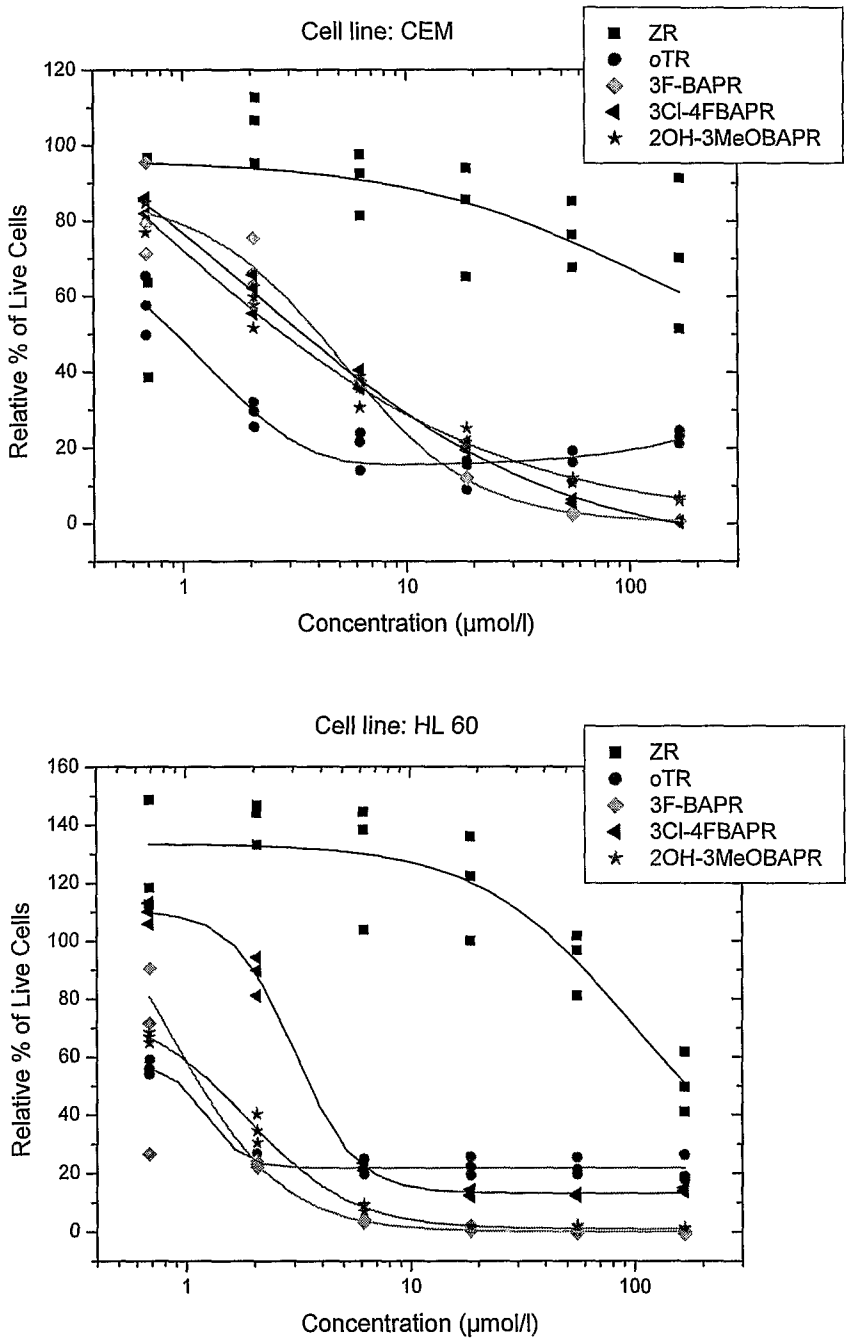

Fig. 3: Inhibition of growth of carcinoma cell line CEM (A) and HL60 (B) by new cytokinins. Cytotoxicity was measured using Calcein AM assay. Activity is presented as percentage of maximal activity (in absence of inhibitors). ZR: zeatin riboside; oTR: *ortho*-topolin riboside; 3F-BAPR: 6-(3-fluorobenzylamino)purine riboside; 3Cl-4FBAPR: 6-(3-chloro-4-fluorobenzylamino)purine riboside; 2OH3MeOBAPR: 6-(2-hydroxy-3-methoxybenzylamino)purine riboside.

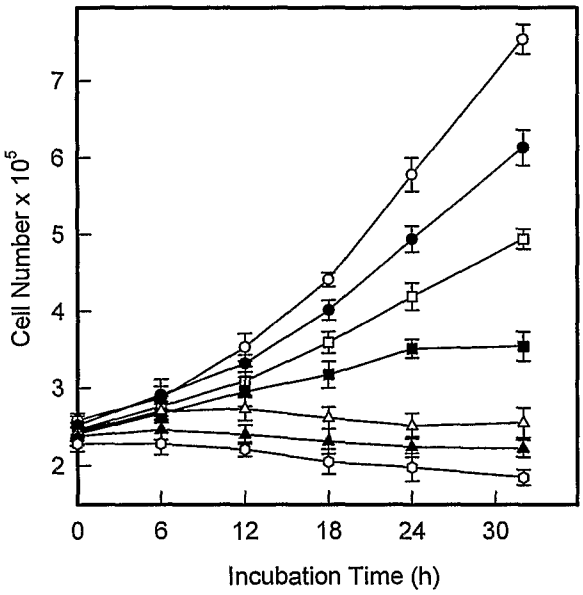

Fig. 4. Inhibition of HL-60 cell proliferation induced by 2OH3MeOBAPR. 2OH3MeOBAPR was added to the exponentially growing cells in following concentrations: 2.5μM (●), 5μM (□), 10μM (■), 20μM (△), 40μM (▲) and 60μM (⬡). Control cells cultivated on standard media without 2OH3MeOBAPR (○).

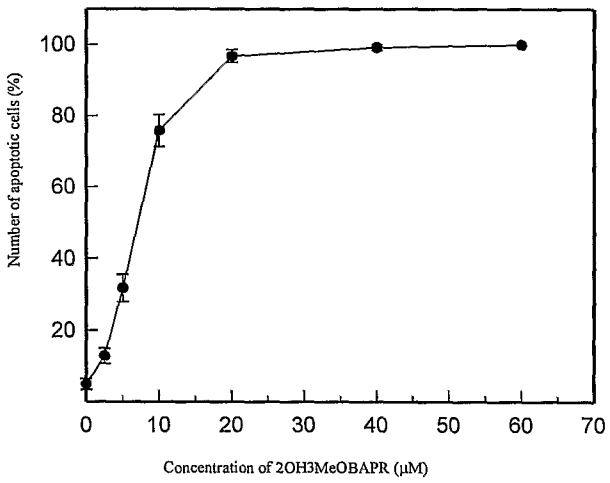

Fig. 5. Induction of apoptosis by 2OH3MeOBAPR in HL-60 cells. Different concentrations of 2OH3MeOBAPR were added to the exponentially growing cells. Number of apoptotic cells (with respect to the nucleus morphology) was monitored after 24 h of incubation. Control cells were cultivated on standard media without 2OH3MeOBAPR.

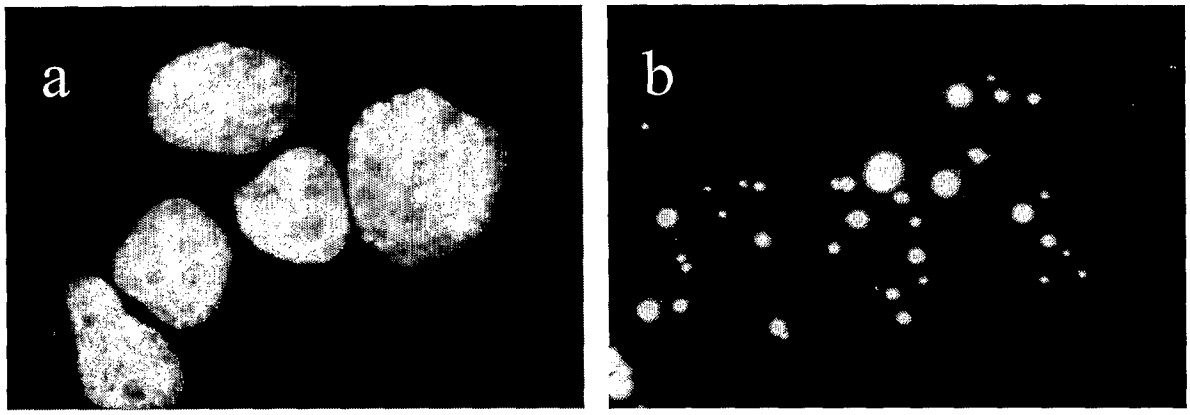

Fig. 6. Effect of 2OH3MeOBAPR on HL-60 cell nuclear morphology. Nuclei of cells cultivated at standard conditions on media without 2OH3MeOBAPR **a),** nuclei of cells cultivated on media containing 5 μM 2OH3MeOBAPR for 24 hours b)

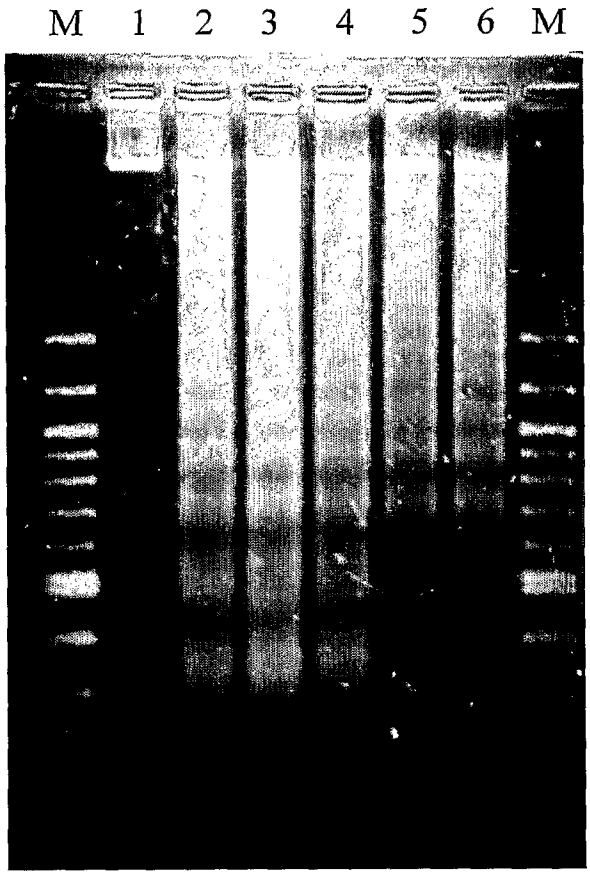

Fig. 7. Effect of 2OH3MeOBAPR on nuclear DNA integrity of HL-60 cells. M – molecular weight standards. Line 1- DNA isolated from cells cultivated on media without 2OH3MeOBAPR. Line 2-6 DNA isolated from cells cultivated on media containing 5, 10, 20 40 and 60 μM 2OH3MeOBAPR for 24 h.

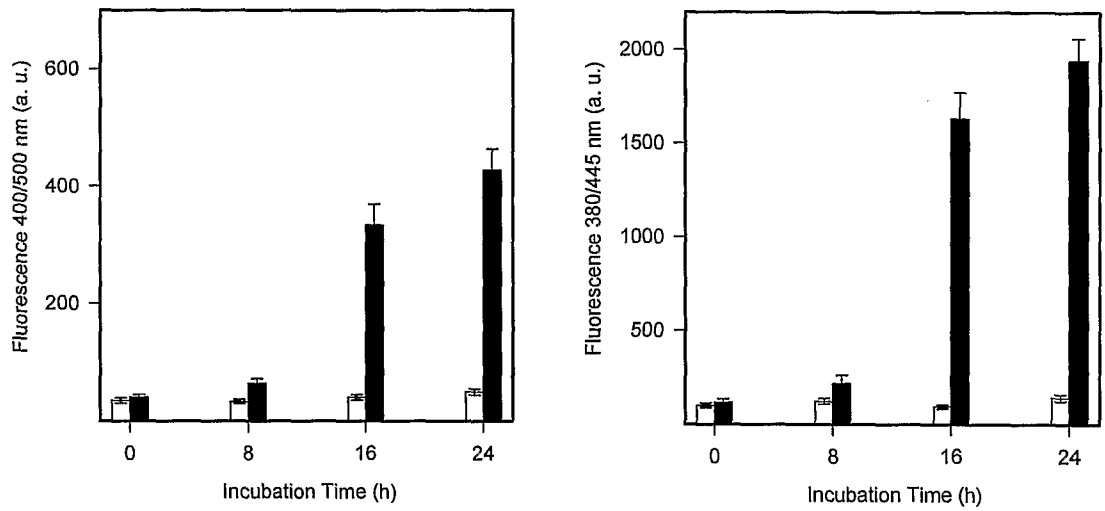

Fig. 9. Effect of 2OH3MeOBAPR on caspase proteases. Cells cultivated in standard media without 2OH3MeOBAPR (white bars), Cells cultivated in media containing 20 μM 2OH3MeOBAPR (black bars). Relative substrate hydrolysis for caspase-9 Ac-LEHD-AFC **a)** and caspase-3 Ac-DEVD-AMC **b)**.

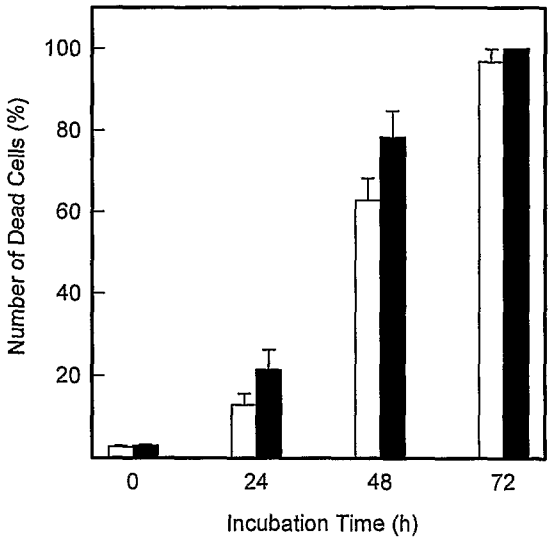

Fig. 10: Effect of caspase inhibitor Z-VAD-FMK on viability HL-60 cells cultivated in presence of 2OH3MeOBAPR. Exponentially growing cells were cultivated for 72h with 20 μM 2OH3MeOBAPR (white bars) and combination of 20 μM 2OH3MeOBAPR and 50μM Z-VAD-FMK (black bars). Cell viability was measured during the incubation using combined FDA/PI staining.

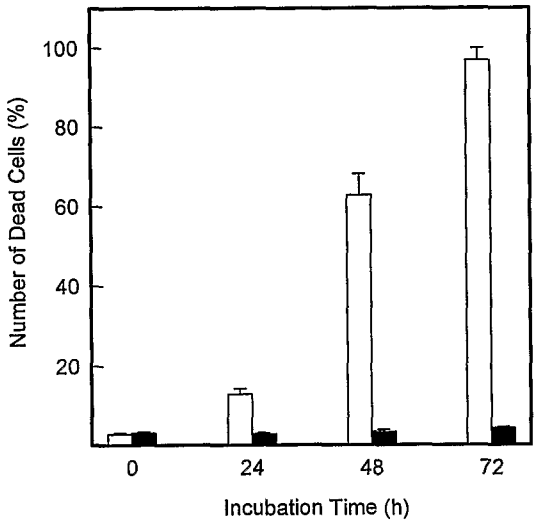

Fig. 11: Effect of adenosine kinase inhibitor, 4-amino-3-iodo-1β-D-ribofuranosylpyrazolo [3,4-d]-pyrimidine (AIRPP), on viability of HL-60 cells cultivated in presence of 2OH3MeOBAPR. Exponencially growing cells were cultivated for 72h with 20 μM 2OH3MeOBAPR (white bars) and comdination of 20 μM 2OH3MeOBAPR and 1μM AIRPP (black bars). Cell viability was measured during the incubation using combined FDA/PI staining.

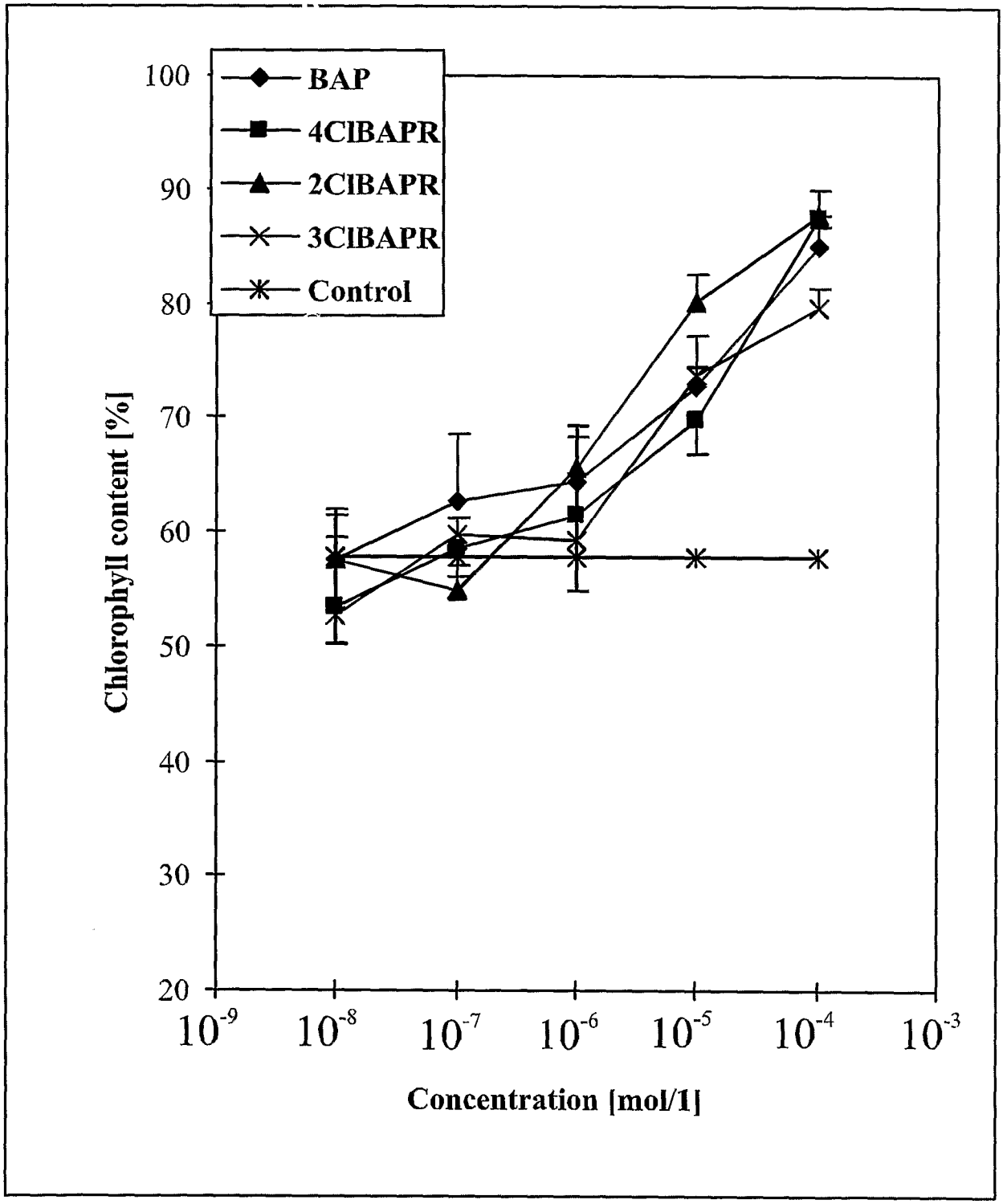

Fig. 12: Effect of tested compounds on retention of chlorophyll in excised wheat leaf tips. Values are expressed % of initial chlorophyll content of fresh leaves before the incubation. Dashed line indicates control incubation without any cytokinin, which was 57, 7 ± 0, 9.

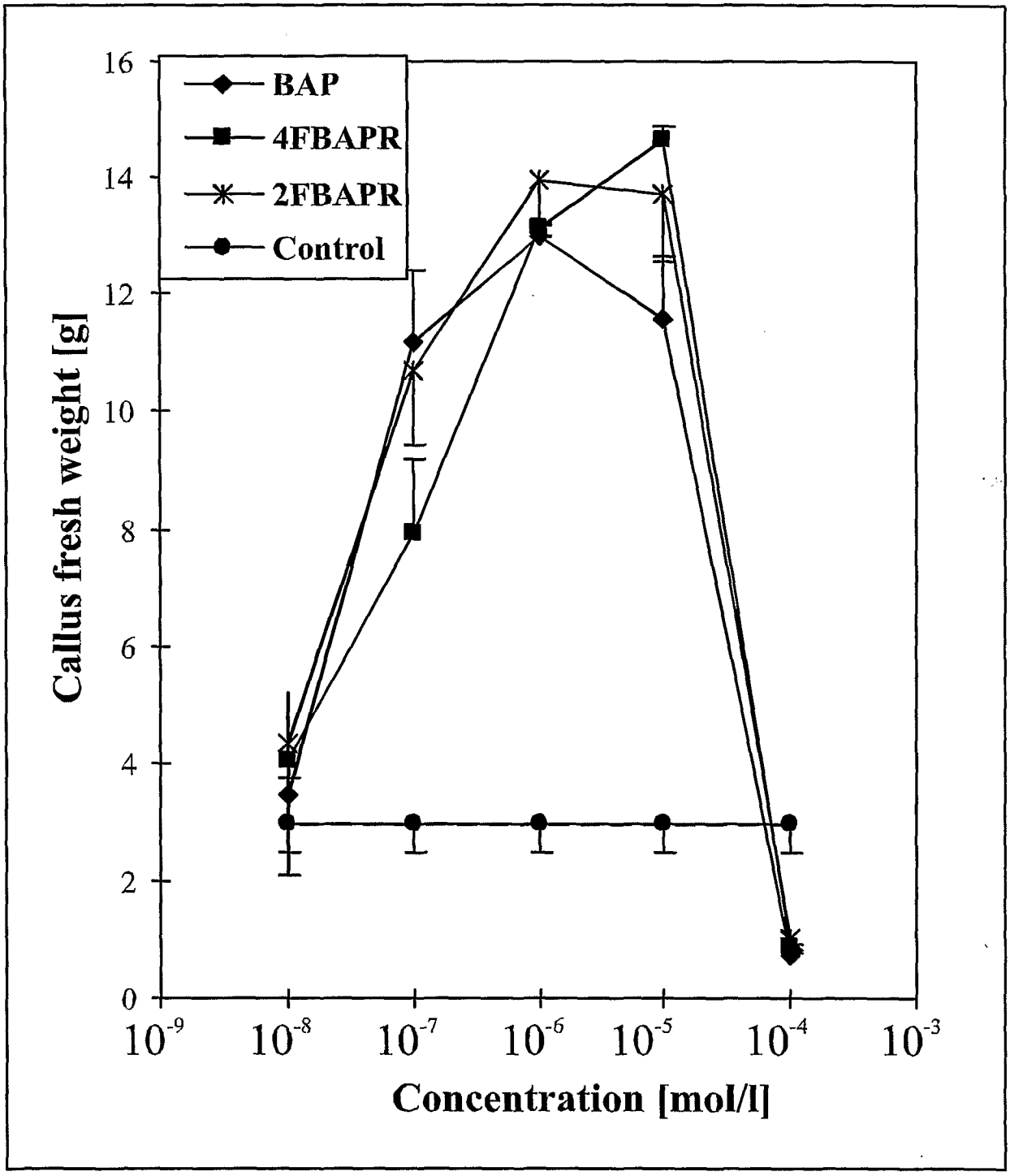

Fig. 13: Effect of tested compounds on fresh weight yield of tobacco callus culture. Error bars show standard deviation of the mean for 5 replicate determinations. Line —●— indicates the value for the control treatment without any cytokinin, 2,5 ± 0,3 g.

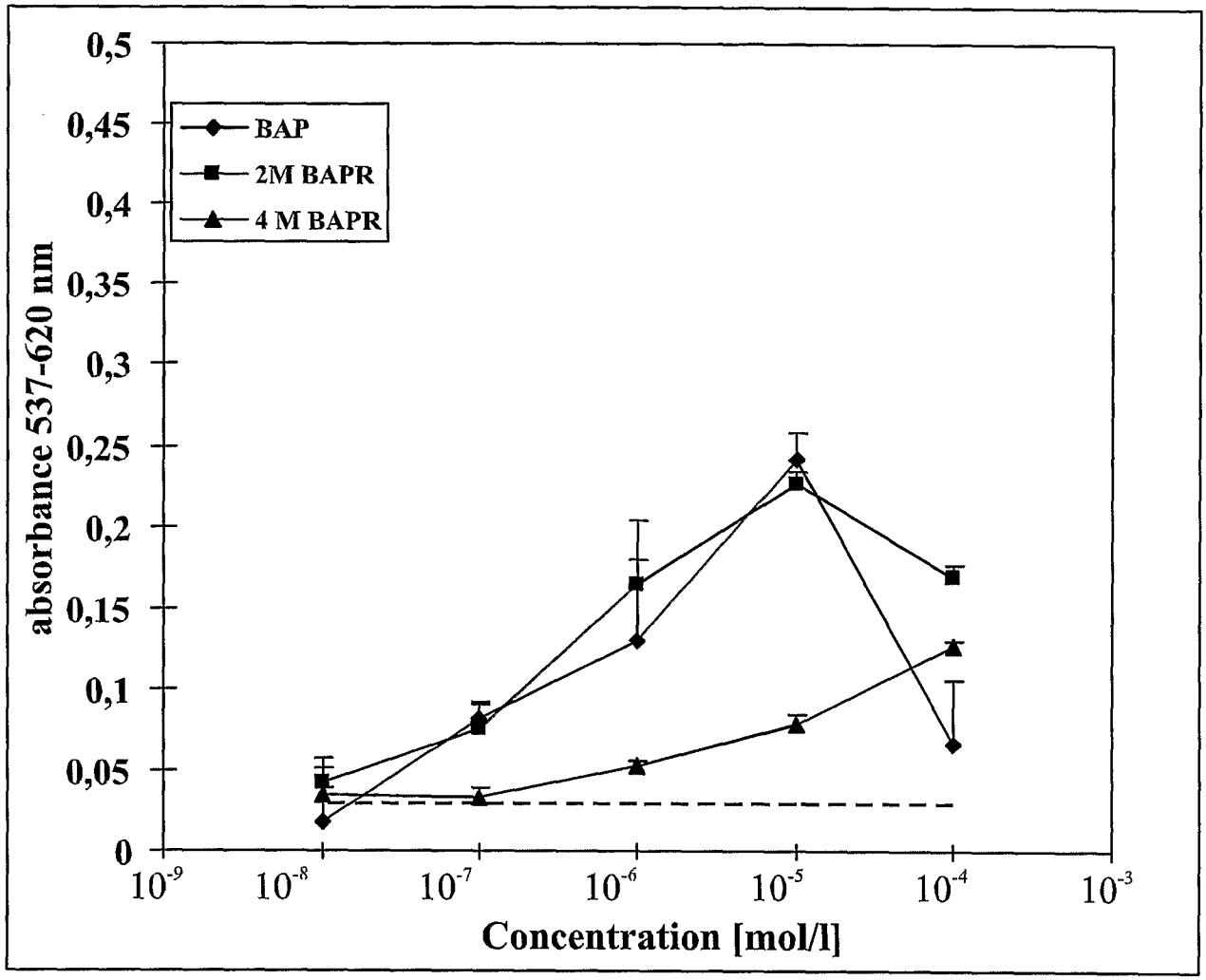

Fig. 14: Effect of tested compounds on dark induction of betacyanin synthesis in *Amarantus caudatus* cotyledons/hypocotyls explants. Values represent the difference in O.D. units between absorption at 537 and 620 nm.

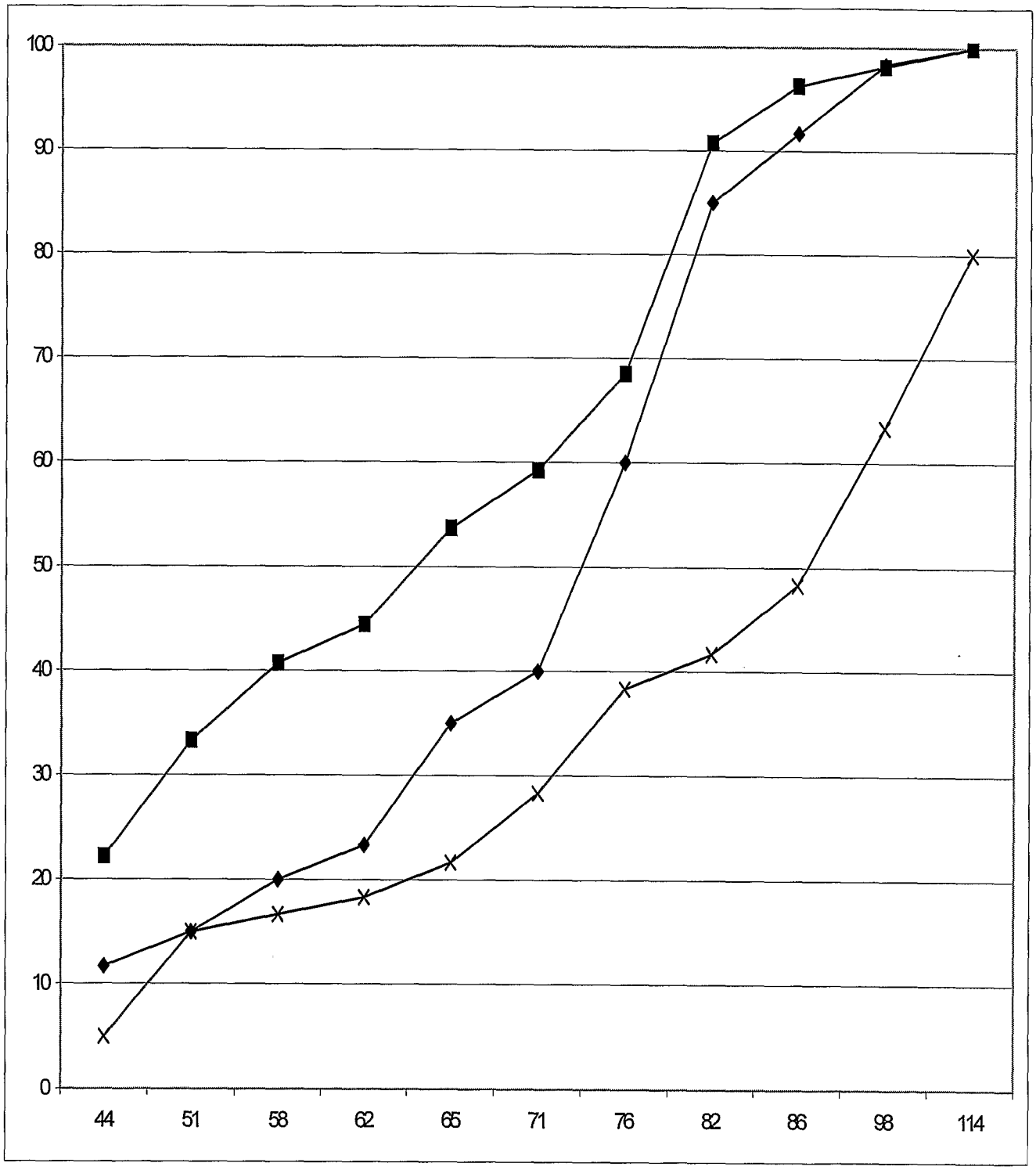

Fig. 15. Relative number of with at least one brown leaf in function of culture time (■: BAP, ●: mT, ▲: mMeOBAPR)

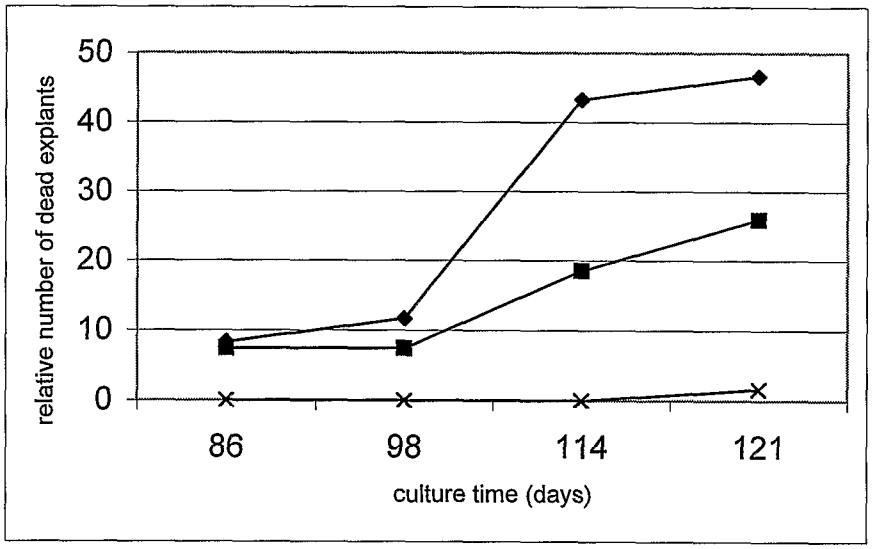

Fig. 16. Relative number of dead explants in relation to culture time (■: BA, ●: mT, ▲: mMeOBAPR)

Fig. 17. Left: dead *Rosa* explant on BA containing medium; right: vigorous *Rosa* plantlet after 121 days of cultivation on mMeOBAPR containing medium