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Novel benzothiazole-piperazine derivatives with anticancer activity

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New series of benzothiazole-piperazine derivatives are synthesized and their cytotoxic activities are evaluated on colorectal (HCT-116), breast (MCF-7) and hepatocellular (HUH-7) cancer cell lines by sulforhodamine B assay. Results are compared with 5-fluorouracil as reference compound.

Dihalo substituted compounds BTP-2 (*N*-(6-ethoxybenzothiazole-2-yl)-2-[4-(2,6-dichlorobenzyl)piperazinyl]acetamide) (*HCT-116*:GI_{50} =0.4 µM; *HUH-7*: GI_{50} =0.7 µM; *MCF-7*: GI_{50} =2.6 µM) and BTP-7 (*N*-(6-ethoxybenzothiazole-2-yl)-2-[4-(4-bromo-2-fluorobenzyl)piperazinyl]acetamide)(*HCT-116*:GI_{50} =0.9 µM; *HUH-7*: GI_{50} =0.3 µM; *MCF-7*: GI_{50} =12.2 µM) are found to have highest cytotoxic activities in all studied cancer cell lines.

Biography:

Professor Yarim has completed his Ph.D from Hacettepe University and postdoctoral studies from ETH-Zürich. Professor Yarim has studied anticancer drug design and she has authored several peer-reviewed reports. She has served on numerous review committees for the National Science Foundation in Turkey. She has served on the editorial boards for the *Pharmacologia*. She is a member of the QSAR Society.