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SV40 T/t-common polypeptide enhances the sensitivity of HER2-overexpressing human cancer cells to anticancer drugs Cisplatin and Doxorubicin

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HER2-overexpressing cancer cells are resistant to cisplatin (CDDP) and doxorubicin (DXR). Previously, we reported that SV40 T/t-common polypeptide can specifically induce apoptosis in many HER2-overexpressing cancer cells but not in non-HER2-overexpressing cancer cells. Here, we report that SV40 T/t-common polypeptide could specifically sensitize HER2-overexpressing cancer cells to CDDP and DXR and specifically enhance CDDP or DXR-induced apoptosis in these cells. This activity of T/t-common may be attributed to its ability to down-regulate Bcl-2 and Bcl-XL and to modulate ERK and JNK activities in CDDP or DXR-treated HER2-overexpressing cancer cells. T/t-common could enhance the antitumor activity of DXR on HER2-overexpressing ovarian tumor in NOD/SCID mice, suggesting that combination therapy using T/t-common and chemotherapeutic agents may provide a new approach for treating HER2-overexpressing cancers.

Biography

Won-Bo Wang completed his PhD at Purdue University and was a Postdoctoral Fellow at Dana-Farber Cancer Institute. He, now, is a Professor in College of Medicine, National Taiwan University.

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