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EFFECT OF 9-CIS RETINOIC ACID (9-CIS RA) ON HUMAN PRIMARY MELANOCYTES AND METASTATIC MELANOMA CELLS. Douglas T. Yamanishi, Joel E. Voboril, Edward A. Wagner Jr., and Frank L. Meyskens Jr. Clinical Cancer Center, and Dept. of Med., Univ. of California, Irvine, California.

Our previous studies have determined that low doses of trans retinoic acid (tRA) inhibited human melanocytes, but high doses of tRA were required to inhibit melanoma cells. We therefore investigated whether another retinoic acid derivative may inhibit the growth of human melanoma cells. We measured the effect of 9-cis RA on cell proliferation and the RAR RNA transcript expression levels in human melanocytes and melanoma cells using cell proliferation assays and Northern blot hybridization analysis. Melanocytes were slightly stimulated following treatment with 9-cis RA; however, proliferation decreased in 3 of 4 melanoma cell strains. Melanocytes expressed RAR α , β , and γ RNA transcripts. Melanoma cells expressed RAR α , and γ , but only 2 of 4 melanoma cell strains expressed the RAR β RNA transcripts. Our studies seek to determine the effect of 9-cis RA and tRA on the expression of the RAR and RXR isotypes and their relationship to cellular response.