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Novel Small Bioactive Compounds for the Control of Melanoma Cell Proliferation and Migration

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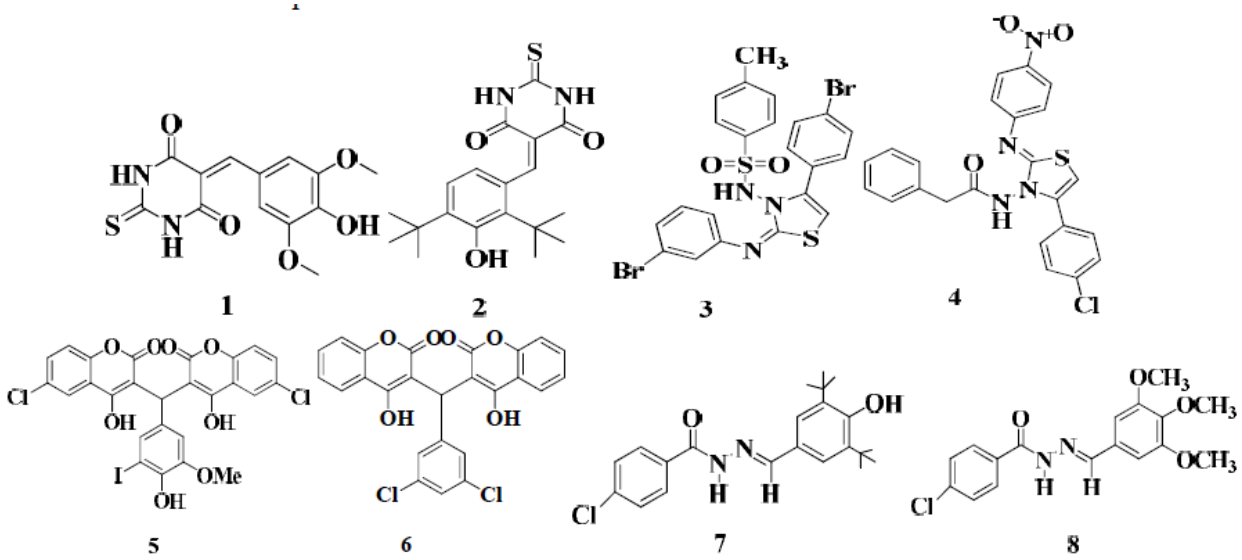
Melanoma is a deadly form of skin cancer due to its high propensity to metastasize through the critical processes of cell migration and invasion. Out of many synthetic molecules, eight compounds (compounds 1, 2, 3, 4, 5, 6, 7 and 8) have been selected as the most effective anti-melanoma molecules for their capacity to reduce *in vitro* cell proliferation and migration. These compounds are now being further investigated with the aim of understanding their mechanism of action. The most effective molecules, with a potent and selective action against melanoma cells, will be used in animal models and as templates for developing even more potent and specific antimelanoma compounds both *in vitro* and *in vivo*.



Recent Publications

- Ul-Ain Qurat-Choudhary, M. I., and Kochanek, K. S. (2017). P 032-Modulation of Melanoma Cell Proliferation and Spreading by Novel Small Molecular Weight Antioxidants. *Free Radical Biology and Medicine,* 108, S28.
- Barakat, A., Ghabbour, H. A., Al-Majid, A. M., Imad,Ul-Ain,Qurat-, R., Javaid, K., Shaikh, N. N., and Wadood, A. (2016). Synthesis, X-ray crystal structures, biological evaluation, and molecular docking studies of a series of barbiturate derivatives. *Journal of Chemistry*, 2016, 1-11.
- Donat-Vargas, C., Berglund, M., Glynn, A., Wolk, A., and Åkesson, A. (2017). Dietary polychlorinated biphenyls, long-chain n-3 polyunsaturated fatty acids and incidence of malignant melanoma. *European Journal of Cancer,* 72, 137-143.

Biography

Qurat-ul-Ain, is a Ph.D student at Dr.Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi. She is collaborative Research Student at Department of Dermatology and Allergy University of Ulm Germany, Ms. Qurat-ul-Ain has characterized a variety of newly designed chemical compounds in term of their antioxidant and pro-oxidant properties. She studies these in melanoma cell and melanocytes. Some of the studied compounds reveal an inhibitory effect on melanoma cells, but not on their benign counterpart, the melanocyte. The mechanisms of action of these compounds are being investigated. Qurat-ul-Ain has authored 19 articles published in international journals.

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