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Area of Expertise

Research in my laboratory is primarily focused on identifying and developing innovative approaches for cancer diagnostics and treatment. The strategy involves identifying novel compounds that have anti-cancer activity, target differentially expressed cancer specific genes, and work synergistically with standard therapeutic treatments.

The current focus is on targeting proteins such as the transcription factors (Specificity protein family) and inhibitor of apoptosis proteins (IAP family).

Another area of research being pursued is the health disparity in breast cancer. Mortality rates among black women with breast cancer is significantly higher compared to white women. Besides factors like socio-economic status, education level, or access to healthcare that play an important role, there is strong evidence for inherent differences in biology of the tumors between different racial groups. We are currently investigating markers that are differentially expressed among various racial background for use as potential diagnostic and therapeutic targets.

Qualifications

PhD in Biochemistry, Indian Institute of Science Bangalore

MS in Biotechnology, Indian Institute of Technology

BS in Chemistry, Bombay University

Recent Publications

Combination of clotam and vincristine enhances anti-proliferative effect in medulloblastoma cells

Patil, S., Sankpal, U. T., Hurtado, M., Bowman, P., Murray, J., Borgmann, K. R., Ghorpade, A., Sutphin, R., Eslin, D. & Basha, R. M., 15 Jul 2019, In : Gene. 705, p. 67-76 10 p.

Clotam enhances anti-proliferative effect of vincristine in Ewing sarcoma cells

Shelake, S., Sankpal, U. T., Eslin, D., Bowman, P., Simecka, J., Raut, S. L., Ray, A. & Basha, R. M., 15 Feb 2019, In : Apoptosis. 24, 1-2, p. 21-32 12 p.

Copper-tolfenamic acid: evaluation of stability and anti-cancer activity

Hurtado, M., Sankpal, U. T., Chhabra, J., Brown, D. T., Maram, R., Patel, R., Gurung, R. K., Simecka, J., Holder, A. A. & Basha, R. M., 15 Feb 2019, In : Investigational New Drugs. 37, 1, p. 27-34 8 p.

Novel survivin inhibitor for suppressing pancreatic cancer cells growth via downregulating Sp1 and Sp3 transcription factors

Hurtado, M., Sankpal, U. T., Kaba, A., Mahammad, S., Chhabra, J., Brown, D. T., Gurung, R. K., Holder, A. A., Vishwanatha, J. K. & Basha, R. M., 1 Dec 2018, In : Cellular Physiology and Biochemistry. 51, 4, p. 1894-1907 14 p.

Investigational agents to enhance the efficacy of chemotherapy or radiation in pancreatic cancer

Hurtado, M., Sankpal, U. T., Ranjan, A. P., Maram, R., Vishwanatha, J. K., Nagaraju, G. P., El-Rayes, B. F. & Basha, R. M., 1 Jun 2018, In : Critical Reviews in Oncology/Hematology. 126, p. 201-207 7 p.

Targeting specificity protein 1 transcription factor and survivin using tolfenamic acid for inhibiting Ewing sarcoma cell growth

Shelake, S., Sankpal, U. T., Bowman, P., Wise, M., Ray, A. & Basha, R. M., 1 Apr 2017, In : Investigational New Drugs. 35, 2, p. 158-165 8 p.

Tolfenamic acid-induced alterations in genes and pathways in pancreatic cancer cells

Sankpal, U. T., Goodison, S., Jones-Pauley, M., Hurtado, M., Zhang, F. & Basha, R. M., 1 Jan 2017, In : Oncotarget. 8, 9, p. 14593-14603 11 p.

Association of Sp1 and survivin in epithelial ovarian cancer: Sp1 inhibitor and cisplatin, a novel combination for inhibiting epithelial ovarian cancer cell proliferation

Sankpal, U. T., Ingersoll, S. B., Ahmad, S., Holloway, R. W., Bhat, V. B., Simecka, J., Daniel, L., Kariali, E., Vishwanatha, J. K. & Basha, R. M., 1 Oct 2016, In : Tumor Biology. 37, 10, p. 14259-14269 11 p.

Small molecule tolfenamic acid and dietary spice curcumin treatment enhances antiproliferative effect in pancreatic cancer cells via suppressing Sp1, disrupting NF-kB translocation to nucleus and cell cycle phase distribution

Basha, R. M., Connelly, S. F., Sankpal, U. T., Nagaraju, G. P., Patel, H., Vishwanatha, J. K., Shelake, S., Tabor-Simecka, L., Shoji, M., Simecka, J. & El-Rayes, B., 1 May 2016, In : Journal of Nutritional Biochemistry. 31, p. 77-87 11 p.

Combination of Tolfenamic acid and curcumin induces colon cancer cell growth inhibition through modulating specific transcription factors and reactive oxygen species

Sankpal, U. T., Nagaraju, G. P., Gottipolu, S. R., Hurtado, M., Jordan, C. G., Simecka, J. W., Shoji, M., El-Rayes, B. & Basha, R., 1 Jan 2016, In : Oncotarget. 7, 3, p. 3186-3200 15 p.

Sponsored Projects

A Novel Approach to Target Surviving Gene Expression in Medulloblastoma

Sankpal, U.

Intramural Research(UNTHSC)

1/03/15 → 31/08/16