



Press note

Date: 16.05.2021

Is There a Pill that can Halt Cancer Spread to Other Organs? Distinguished Lecture at CUK Address the problem

Though the Central University of Karnataka is functioning in online mode due to the ongoing pandemic, it is constantly engaging its faculties and students with various online quality lectures and interactions. In this regard, Central University of Karnataka organized a lecture and interaction session under the banner of CUK Distinguished lecture series on "Innovative anticancer agents that inhibit metastasis, resistance and primary tumour growth" by an eminent scientist in the field of cancer research, Prof. Des Richardson, Director, Centre for Cancer Cell Biology and Drug Discovery, Griffith University, Brisbane, Australia. The talk was the 13th in the series of Distinguished lectures. The series aims to connect achievers in different fields with students and faculty of the institution.

In the talk, the speaker mentioned that there is no anti-cancer drug available to thwart cancer cells invading other parts of the body by the process called metastasis, which is largely responsible for cancer deaths (~90%). Using his experimental results, he demonstrated the key marker protein NDRG1 (N-Myc Downstream Regulated 1) is responsible, at least partly, for the transmission of several types of cancer cells from one part of the body to other parts. These proteins are expressed in more copies in cancer cells than in normal cells, leading to this transport. The speaker articulated that his research group discovered a new chemical compound, DpC, that successfully inhibited NDRG1 and hence the metastasis in mice. Additionally, this compound was found to overcome the chemotherapy resistance developed by cancer cells upon prolonged treatment with anticancer drugs. This elixir is currently under multi-centre human clinical trials Phase I for the treatment of advanced and resistant cancer. The speaker also emphasised the need for collaborations between chemistry, biology and industry to work together in developing novel compounds for treating cancer.

Prof. M.V. Alagawadi, Hon'ble Vice Chancellor of CUK, presided over the event and introduced the forum to CUK's achievements and academic framework. Prof. Basavaj P. Donur, Registrar, as well as other faculty and students, attended the lecture. Dr P. K. Mangalam introduced the aim and purpose of 'CUK distinguished lecture series to the forum. The program ended with a vote of thanks by Dr.P. Duraippandi, Assistant Professor of Chemistry, CUK.

(Ms.Deepthi, Public Relation Officer)

**Innovative anti-cancer agents that inh
metastasis, resistance and primary tumour growth**



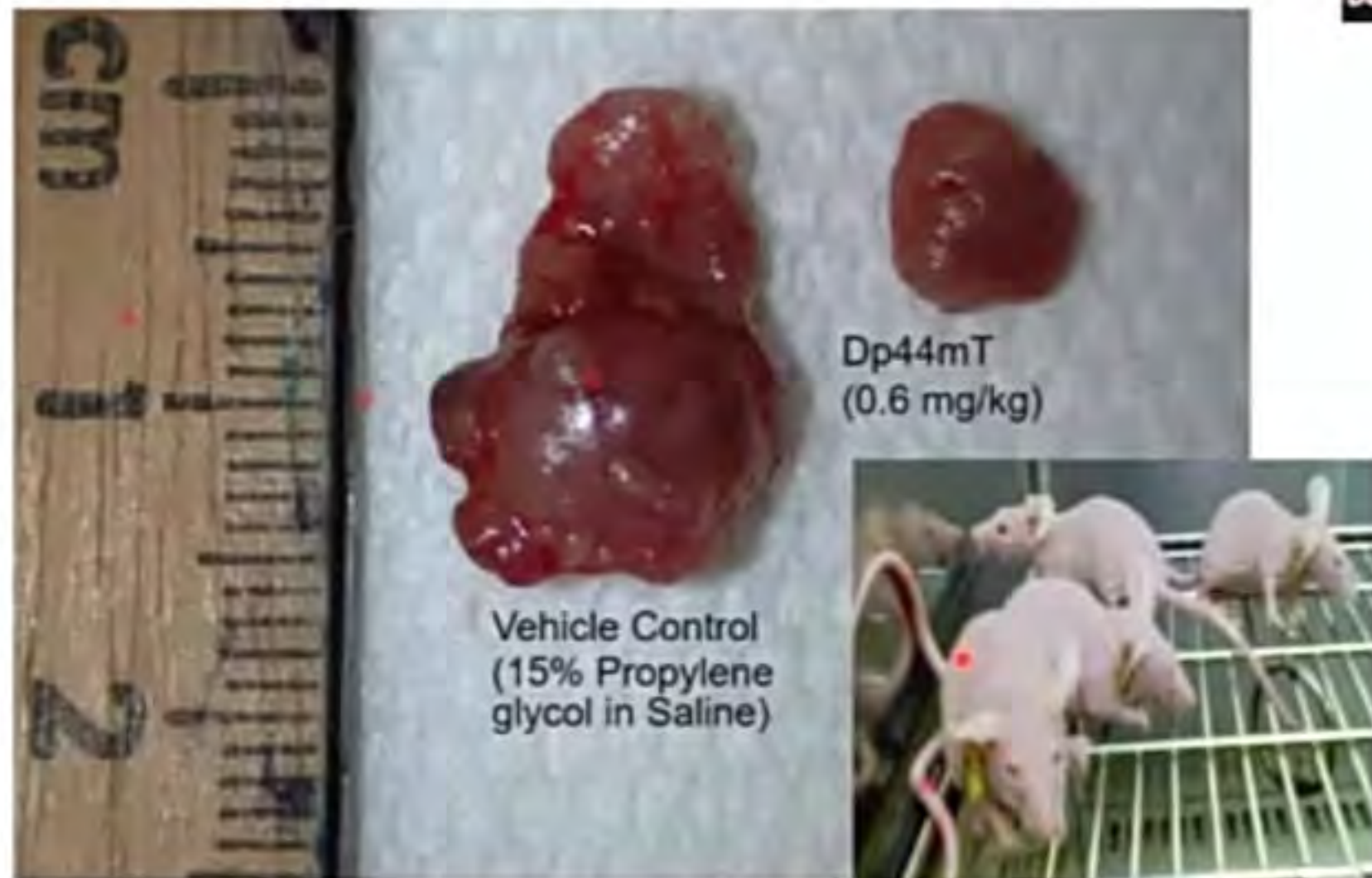
Professor Des R. Richardson, PhD, DSc (UWA). F.F.Sc, FRCPath (UK)
Alan Mackay-Sim Distinguished Chair of Cancer Cell Biology
NHMRC Senior Principal Research Fellow
Director, Centre for Cancer Cell Biology and Drug Discovery



Griffith UNIVERSITY
Griffith Institute for Drug Discovery
Queensland, Australia

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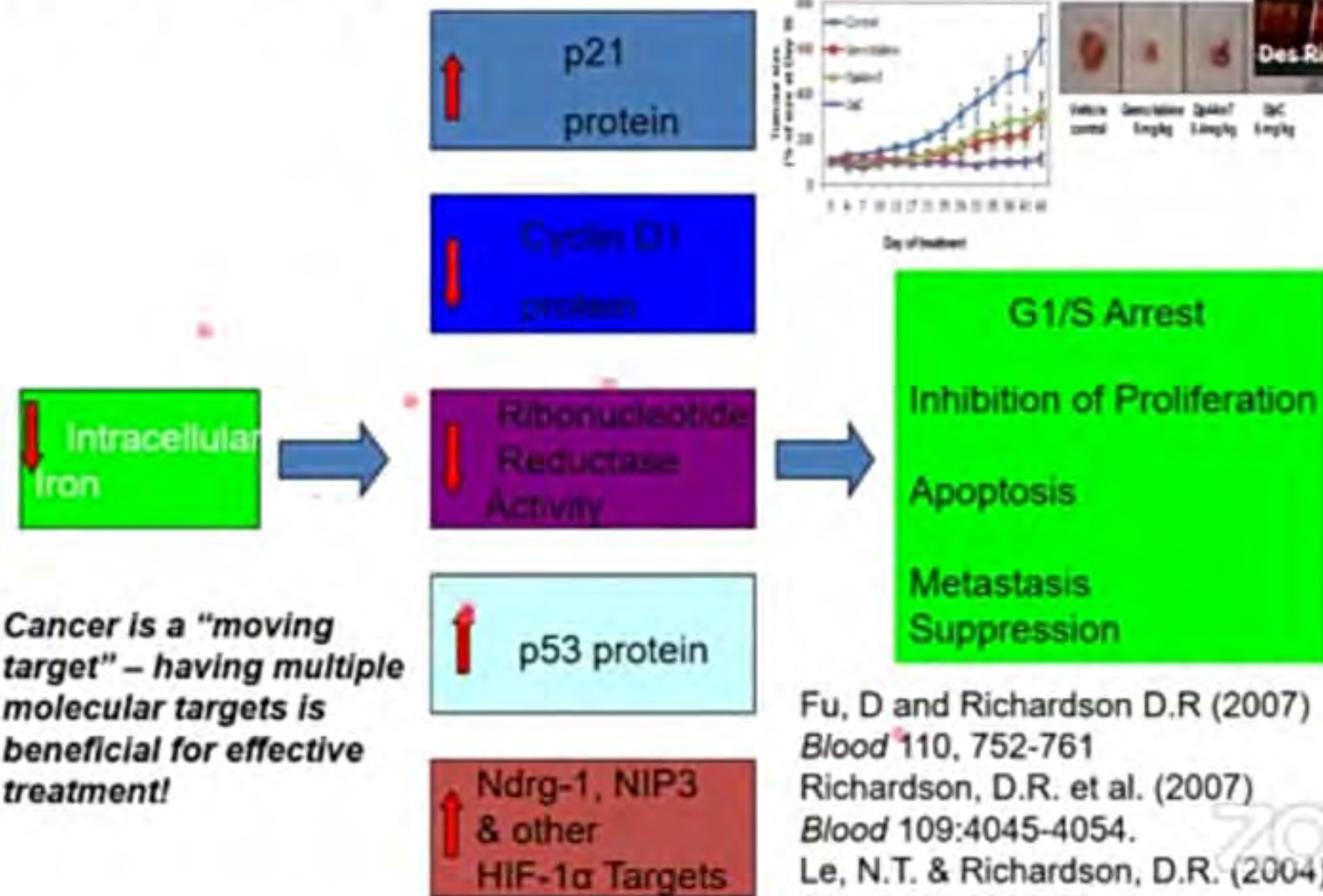
Inhibition of the Growth of Malignant Melanoma in Nude Mice Using the Iron Chelator, Dp44mT



Whitnall, M., Howard, J. Ponka, P. and Richardson, D.R. (2006) *Proc. Natl. Acad. Sci. USA* 2006;103:14901-6.

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Multiple Molecular Pathways are Involved in Inhibition of Tumour Growth



Cancer is a "moving target" – having multiple molecular targets is beneficial for effective treatment!

Fu, D and Richardson D.R (2007)
Blood 110, 752-761
 Richardson, D.R. et al. (2007)
Blood 109:4045-4054.
 Le, N.T. & Richardson, D.R. (2004)
Blood 104:2967-75.



Des Richardson

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Inhibition of the "triad of death" in cancer by di-2-pyridylketone thiosemicarbazones.

