Potential new multiple myeloma therapy developed

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A treatment for the incurable blood cancer Multiple Myeloma could be developed in the future if a groundbreaking scientific discovery is applied to new Leeds-based research into the disease.

Yorkshire Cancer Research-funded scientists at the University of Leeds are building on a recent high-profile discovery that found that even a modest reduction in the level of the human protein IRF4 in cancerous multiple myeloma plasma cells results in their death but crucially leaves normal healthy blood cells unaffected.

The five strong collaborative research team believe this discovery, which was recently reported by a US group in the international scientific journal *Nature*, could now open up a "therapeutic window" for multiple myeloma sufferers who currently have a very poor prognosis of between just three to five years.

They plan to test the strategy on isolated multiple myeloma cells taken from cancer patients in laboratory-based culture at the University of Leeds and develop a potential anti-myeloma drug which they will later test through human clinical trials.

Dr. Joan Boyes, who is collaborating with Professor Eric Blair, Dr. Gordon Cook, Dr. Graham Cook and Professor Adrian Whitehouse on the project, said: "We will insert a genetically-engineered adenovirus of the type previously used in clinical studies into the Multiple Myeloma cell culture in our lab to deliver molecules that will specifically trigger a

reduction in the IRF4 protein levels within the cancer cells.

"We will also examine ways to improve adenovirus targeting of these multiple myeloma cancer cells which will hopefully lead to longer term studies where we can then develop the adenovirus as a potential drug compound.

"Multiple Myeloma is a really dreadful disease and it is the second most common cancer of the blood. Many current treatments do not efficiently kill the cancerous cells that are buried deep within the bone marrow.

"This piece of research is very exciting and if all goes to plan it could eventually go through to future clinical trials as it has potential to increase remission times in multiple myeloma cancer patients quite remarkably."

Provided by Yorkshire Cancer Research

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