Repurposed therapies in AML and MDS

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There is an urgent and unmet need for new effective and less toxic therapies for acute myeloid leukemia (AML) and myelodysplastic syndrome (MDS) patients. This is particularly important for the elderly patients who are often unfit for intensive therapies. The number of mutations that have now been reported as being associated with both AML and MDS mean the potential mutation combinations would mean a plethora of drugs may be required. The number of new therapies being developed through the drug pipeline of pre-clinical, phase 1, 2 and 4 before FDA approval is very low and can take up to 15-18 years and billions of dollars. However, there are a large range of approved therapies for all types of conditions such as diabetes, epilepsy, cardiac diseases, mental disorders etc., which are known to the safe and well tolerated in humans. The question is could any of these therapies be repurposed or repositioned to be a treatment for AML or MDS and if so how can the most effective be identified? We have employed alternative approaches to identify candidate drugs for repurposing and these approaches and the results will be discussed in context of AML and MDS.

Biography

Ken Mills is the Chair of Experimental Hematology in the Centre for Cancer Research and Cell Biology (CCRCB) in Queen’s University Belfast. He coordinates the activities of the Blood Cancer Research Group with a focus on the molecular aspects of MDS and AML to identify novel therapies. He has published over 135 papers, several book chapters and he is an Editorial Board Member and Reviewer for high impact journals.

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