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New insight into the mechanism of granulocyte colony-stimulating factor (G-CSF) that induces the mobilization of neutrophils

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Over the past 20 years, granulocyte colony-stimulating factor (G-CSF) has driven the attention of researchers as a therapeutic agent for curing patients suffering from neutropenia. Despite the successful use of G-CSF, it currently requires daily injections, which are inconvenient, expensive, and distressing for children. Therefore, an alternative strategy for using G-CSF for treatment is needed. Understanding the G-CSF structure, expression, mechanism of action, and how it induces neutrophils mobilization is crucial to producing promising [cancer therapy](#). The ability of G-CSF to mobilize hematopoietic stem cells from the bone marrow into the blood circulation was consequently exploited and altered the practice of [hematopoietic stem cell](#) transplantation. This is the motivation for the current review, which sheds light on the history of G-CSF and then focuses on the mechanism of action upon binding to its receptor (G-CSFR) and how that had led to the stimulation of neutrophils mobilization. The findings of this review show new insight into the mechanism of G-CSF that induces neutrophils mobilization. Thus, Understanding the G-CSF will provide a more effective treatment for all neutropenia patients.

Biography

Abdulrahman Theyab is from Security Forces Hospital, Saudi Arabia. His research interest includes [Hematology](#), [Cancers](#).

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