The ATP-binding cassette (ABC) transporters are a superfamily of membrane proteins with the capability of transporting a variety of diverse compounds through membranes, with their membrane traverse relying on ATP hydrolysis. The human genome contains 48 ABC genes with almost one-third harboring mutations that produce inborn errors of metabolism; such errors have provided insight into their physiological roles and contribution to human disease. It has been postulated that functional alteration of many ABC transporters modifies disease state or progression. My presentation will focus on the role of ABC transporters to neonatal respiratory distress syndrome and myeloid leukemia.