Title: Effects of some plant-derived anti-leukemic drugs on individualized leukemic-cell population profiles in Egyptian patients.

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Date: July 31, 2015  14:00-15:30
Venue: Seminar Room 483 (Igakukei-tou 4th floor)

Abstract:

The relationship between treatments with plant-derived drugs and leukemia-associated (immuno)phenotypes (LAIPs) of clinically-isolated leukemia cells is not well-established in the Egyptian population. The objective of the present study was two-fold: 1) to develop a preliminary clinical prognostic map for commonly-expressed LAIPs in Egyptian patients clinically-diagnosed with leukemia, and 2) to assess the potential implication of LAIPs in the response rate to ten natural products of plant origin. Increased expression of LAIPs: CD4, CD14, CD33 and CD34 is considered as a surrogate marker of the desired response of leukemia cells to treatment with plant-derived drugs. Whereas, the increased expression of two particular LAIPs, namely: MPO and DR, was associated with poor prognostic outcomes following treatment with the plant-derived drugs. Our data present evidence that five out of the ten plant-derived drugs tested elicit the expression of several desirable LAIPs biomarkers. These findings clearly highlight the potential treatment efficacy of some plant-derived drugs against some selected Egyptian leukemic cell types.