

ABSTRACT

The present application relates to a phototherapy apparatus for treating Alzheimer's disease and associated conditions, including a support mechanism and an array of near-infrared irradiation units. The apparatus emits near-infrared light into an accommodation space. When the subject's head is positioned in place, the near-infrared light irradiation delivered to the subject's head satisfies a coordinated irradiation condition of an irradiated surface area ratio relative to a surface area of a reference calvarial region of the subject's head and the delivered radiant power level. The surface area of the reference calvarial region is the external surface area of a surface of the subject's head within a total boundary line, the total boundary line extends from a glabella point along supraorbital ridges, passes through preauricular points on both sides, curves posteriorly around the head to pass between the inion and the electrode positions O1, OZ, and O2 of the international 10-10 standard system, and then converges, and the irradiated surface area ratio is in the range of 30% to 65% or more. The apparatus can achieve a robust, sustained, and significant therapeutic effect on Alzheimer's disease and associated conditions of the subjects.

FIG. 1(a)