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Symposium-1: In hope of getting over the present stage of clinical PDT

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Argon-dye laser, excimer-dye, gold-vapor and Nd-YAG pumped optical parametric oscillator (OPO) larger lasers had been used in Japan as the light source for photodynamic (fluorescent) diagnosis (PDD) and photodynamic therapy (PDT). Recently, compact and cheaper LD lasers have been used as the light sources of PDD and PDT, respectively. We found that the photoproduct of Pp-IX is produced by the irradiation for Pp-IX to create a new photosensitizer. In the results, we could produce the double wavelength light source (LD laser) against Pp-IX and the photoproduct. In future, we will develop the 3 wavelength LD laser adding the excitation wavelength to the double wavelength. In hope for the new type LD laser development, compact, low cost and convenience to use and move.

On the other hand, it will be hoped to develop these photosensitizers (photofurod and Pp-IX) to create the other derivative photosensitizer (photoproduct, Chlorine-E6 derivatives) during the irradiation. 5-Aminolevulinic acid (5-ALA) is produced in our body to take metabolized of porphyrine synthesized cycle to produce hem from Pp-IX. It is true to accumulate in a tumor tissues 4 hr after the administration of 5-ALA. It will need to know the metabolism system of 5-ALA in the normal organs. It will be very important to use the efficiently the 5-ALA combined with the LD lasers for the PDD and PDT against tumor treatments to know the metabolite providences in the body.