

Review

Photodynamic antimicrobial chemotherapy (PACT)

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Whereas the photodynamic therapy (PDT) of cancer has recently shown rapid clinical acceptance, photodynamic antimicrobial chemotherapy (PACT)—which predates the related cancer regimen—is not widely appreciated. Like PDT, PACT utilizes photosensitizers and visible or ultraviolet light in order to give a phototoxic response, normally via oxidative damage. Currently, the major use of PACT is in the disinfection of blood products, particularly for viral inactivation, although more clinically-based protocols are being developed, e.g. in the treatment of oral infection. The technique has been shown to be effective *in vitro* against bacteria (including drug-resistant strains), yeasts, viruses and parasites. A wide range of photosensitizers, both natural and synthetic, is available with differing physicochemical make-up and light-absorption properties. PACT is proposed as a potential, low-cost approach to the treatment of locally occurring infection.