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Kritzler

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(54) **METHOD AND COMPOSITION FOR USE IN PREPARATION OF A PATIENT FOR SURGERY**

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,335,115	A	6/1982	Thompson et al.	
4,975,271	A	12/1990	Dunn et al.	
5,624,906	A *	4/1997	Vermeer	A61K 8/60 514/23
5,656,286	A	8/1997	Miranda et al.	
5,747,058	A	5/1998	Tipton et al.	
6,299,900	B1 *	10/2001	Reed	A61K 8/046 424/448
6,951,642	B2	10/2005	Scholz et al.	
2002/0022660	A1	2/2002	Jampani et al.	
2003/0113356	A1	6/2003	Deckner et al.	
2004/0219227	A1	11/2004	Modak et al.	
2006/0052452	A1 *	3/2006	Scholz	A61K 9/0014 514/557

FOREIGN PATENT DOCUMENTS

JP	2003-515612		5/2003
WO	WO 98/44930		10/1998
WO	WO98/53036		11/1998
WO	00/15036	A1	3/2000
WO	01/41567	A1	6/2001
WO	01/41573	A1	6/2001
WO	03028766	A1	4/2003
WO	03/034994	A2	5/2003
WO	WO2004/028502		4/2004
ZA	9907202	B	5/2000

OTHER PUBLICATIONS

Nielsen et al. J. clin Path., 1975, 28, 793-797.*

Jorgensen et al. "Effect of a Chlorhexidine Dressing on the Healing after Periodontal Surgery", J. Periodontal, Jan. 1974, pp. 13-17.*

Jorgensen et al. ("Effect of a Chlorhexidine Dressing on the Healing after Periodontal Surgery", J. Periodontol., Jan. 1974, pp. 13-17).*

Supplemental European Search Report of EP 06 72 1433 dated Nov. 19, 2012.

Sebben et al., "Surgical antiseptics", Journal of the American Academy of Dermatology, C.V. Mosby, St. Louis, MO, US, vol. 9, No. 5 (Nov. 1, 1983) pp. 759-765.

D.J. Byrne, et al., "Rationalizing whole body disinfection," Journal of Hospital Infection, (1990), vol. 15, pp. 183-187.

R.A. Garibaldi, "Prevention of intraoperative wound contamination with chlorhexidine shower and scrub," Journal of Hospital Infection, (1988), vol. 11, (Supplement B), pp. 5-9.

Xue Guangbo et al., "[Modern] Antisepsis," People's Military Medical Press, Jul. 2002, pp. 444-463.

Kirschner et al., "Transdermal resorption of an ethanol and 2-propanol-containing skin disinfectant," Langenbecks Arch Surg., 2009, vol. 394, pp. 151-157.

(Continued)

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(57) **ABSTRACT**

Composition for application to skin comprising a biocide or combination of biocides (such as chlorhexidine, halogenated phenols, quaternary ammonium compounds; povidone-iodine; zinc pyridinethione; alcohols etc.) and at least one transcutaneous vehicle (for example alkyl methyl sulfoxides, alkyl pyrrolidones, glycols, glycol ethers and glycol esters) effective to convey the biocide to a sub epidermal "resident" micro-organism. Also a method for preparing a patient for surgery comprising the step of treating an area of the patient's skin at, and in the surrounding the vicinity of, the site of an intended surgical incision with a composition effective to kill more than 93% of both "transient" and "resident" micro-organisms.

18 Claims, No Drawings