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Radioprotection effect and Immune Enhancement for *Enterococcus Faecalis* (EF 2001)

Yeunhwa Gu¹, Hiroyuki Iwasa², Takashi Nakamura¹, Masahoro Iwasa², Takeo Hasegawa¹, Takenori Yamashita¹, Masami Oshima¹, Kaoru Terai¹, Mituhana Yuicti¹, Kenichi Bamen¹, Tetsuo Takeuchi³, Kyoo Seok Ahn⁴

1 : Faculty of Health Science, Suzuka University of Medical Science, 1001 Kishioka-cho
Suzuka Mie 510-0293, Japan

2 : Nihon Berumu Co., Ltd, k-wing 4F, 5-2-1, kojimachi, Chioda-ku, Tokyo, 102-0083 Japan

3 : Akeai clinic, 970-41, Anou-tyou, Tabataueno, Agei-gun, Mie, 514-2325 Japan

4 : Department of Pathology, College of Oriental medicine, Institute of Oriental Medicine,
Kyunghee University, Seoul, 130-701, Korea

The preparation reduced to powder, which removed fungi mainly from *Enterococcus / Fekaris 2001*(EF 2001), which was EF 2001, was used in this study. Because L/P activity was recognized from EF 2001, it was examined about the anti-neoplasm effects that it faces Math/A fibrosarcome in the mice, and the analgesic action by the preceding research. They are inoculated 1 x 10⁶ cells and 2 x 10⁵ directly in the right and the left low abdomen region the intratumorale as for the anti-neoplasm simulation by the way of the administration meth A fibrosarcome to each of the BALB/c mouse. The dimension of the tumor enhancement was measured more than the implantation posticus the 3rd day from a total 10 times, the top of the cutaneous even in the 2nd de die in diem the every other day, and the total was examined, and gradation was seen at the time as the sutra. It was dissolved with the fraction of 1mg/0.1ml/mouse in the isotonic sodium chloride solution, and specimen substantial administered neoplasm vicinal rear 3, 4, the 5th-day total 3 times for the right intratumorale. And, pain relief simulation was done with the acetic acid lasing method. The L/P activity had statistical significant difference with the 200ug/mouse dose rate (p<0.05). Catastaltic determination was judged by the antitumor action the tumor enhancement in both low abdominal regions. Then, catastaltic determination was recognized with 1000mg/kg by the analgesic action to the control group.



Radiation as a medical treatment has undergone remarkable development. Without the discovery of the radiation, mankind would have suffered greatly a medicine. Radiation is being used widely in medicine, industry territory and the atomic energy. But, because there is not only a profit but also risk, it is mankind's responsibility to use radiation suitably. The effects on the fetus that it is when sensitivity is the highest toward the radiation is the fetus at this research. Radiation was irradiated in the pregnant mice in the organogenesis stage, and the examination of radiation protection effect was done by this research such as from the embryonic death, external malformation and fetal body weight to the effects of the individual level. When radiation protection effects are examined, we must consider what kind of thing is used for the radiation protection medicine. In this research, EF 2001 which has been used as the anti-cancer medicine, the immunity reinforcement medicine, and so on since former times in the Western countries, that it paid attention to it as a radiation protection medicine. Though it pays attention to EF2001 recently as BRM (Biological Response Modifier) medicine in the world of the country, it is that it became clear that glucose, multiple sugar bodies, and so on were contained in the material. It goes to multiple ways, and lactic ferments are which have been used as the fermentation drink and fermentation food since the old days. It is because lactic ferments have preservation generation metabolism function excellent, multiplication and fermentation, nutrition and effect on immunity reinforcement as a reason. As for the lactic ferments, there are digestion absorption improvement due to increase in amino acid, a vitamin, a proteinaceous resolution, and so on, promotion of appetite, and so on in the effect like nutrition caused by the fermentation. Moreover, it reproduces human body intestinal, and lactic ferments are that a living body defense function is explained from being giving it the effect that is useful for the living body. The function is that arranges intestine action, the repression of the cause of a disease sex bacteria multiplication, the immunity active action of the whole body is clear. EF2001 is which is the heating death fungus (EF 2001) of the ball fungus (good fungus) EF 2001 stock in the intestine classified from the normal person's excrement convenience 7). In the preceding research, which explained of the neutrophil and macrophage, tumor necrosis factor (TNF) production guidance, the immunity active action of the whole body, and so on.

Therefore, it paid attention to the anti-oxidization action of EF2001, the immunity active action of the whole body in this research. Moreover, EF2001 to the radiation, and considers that there is protection effect by the repair of the cell injured by the



radiation due to the immunity activated action. Because it doesn't have fast effect, it is given to enough period mouse, and EF2001 is that research was started in the time when the effect of EF2001 began to appear. EF 2001 was given until the period when the effect of EF2001 appeared on the living body of the mouse, and a radiation was irradiated in the organogenesis stage, and radiation protection effect of EF2001 to the radiation in the individual level was observed by this research. Moreover, as for this research, examine on radiation protection effect of EF2001, and it is a purpose to furnishment data for the foundation research to the radiation protection medicine.