

Animal cell culture, tissue engineering/regenerative medicine, and wave biotechnology

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I had started my research career at Dongguk University in 1988 and would like to finish it at August 31, 2016. During past twenty nine and a half years, I have been particularly interested in animal cell culture, tissue engineering and regenerative medicine, and wave biotechnology.

At the initial stage of my research, I focused my attention to vaccinia virus production using animal cell culture. And then I studied tissue engineering and regenerative medicine at the mid-stage of my research based on the previous animal cell culture experiences. For this, I have made an effort to exploit human somatic/stem cells, biomaterials, and bioreactors. At the late stage of my research, I have been excited in not only red clay-processed material but also the cellular phenomenon responding to wave field. Traditional biotechnology has been extensively leaning toward material level and underrating wave level, even though all organisms on the earth are exposed to (ultra)sound and/or electromagnetic wave field. I named this technology “wave biotechnology” and have explored the interaction between human stem cells and wave field up to recently.

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