

S24-4 HTA technologies based on biosensor and engineered cell

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Biosensors have been developed to determine the concentration of specific compounds *in situ*. They are already widely employed as a practical technology in the clinical and healthcare fields. Recently, another concept of biosensing has been receiving attention by author: biosensing for the evaluation of molecular potency. The development of this novel concept “qualified analysis” has been supported by the development of related technologies, as such as molecular design, molecular biology (genetic engineering), and cellular/tissular engineering. In this talk, I will address the qualified analysis of biosensing and its application to the evaluation of the potency of chemicals in biological systems, in the field of both sensor technology and cellular/tissular engineering. Cellular biosensing may provide information on both pharmaceutical and chemical safety, and on drug discovery *in vitro* as a HTA tool.