GS6-3 Antibody-based proteomics for discovery of tumor organization blood vessel biomarkers and development of this antibody

○Takuya YAMASHITA[1], Naoki UTOGUCHI[1], Ryo SUZUKI[1], Kazuya NAGANO[2,3], Shinichi TSUNODA[2,4], Yasuo TSUTSUMI[2,3,4]

[1]Grad.Sch.Pharm.Sci.,Teikyo Univ, [2]Nat'I Inst. Biomedical Innovation, [3]Grad.Sch.Pharm.Sci., Osaka Univ, [4]MEI Center, Osaka Univ

In rate year, there are great hopes that the disease proteomics and antibody medicine contribute to medical care. The disease proteomics is able to identify disease associated proteins and to analyze the function and network of these proteins. In this symposium, we would like to introduce "Antibody-based proteomics for discovery of tumor blood vessel biomarkers and development of this antibody "as one example of the new biomarker search method.

The tumor blood vessel works as the lifeline for cancer. If we succeed in the identification of these tumor vessel markers and developed in these antibodies, it is enabled that early diagnosis and targeting therapy of the cancer. At first we tried to develop the antibody which became the powerful tool of the tumor blood vessel markers search. We took a following strategy.

①:development of tumor vessel immune antibody library by phage display method.

②:selection the tumor vessel antigen specific antibodies

③:evaluation affinity of these antibodies

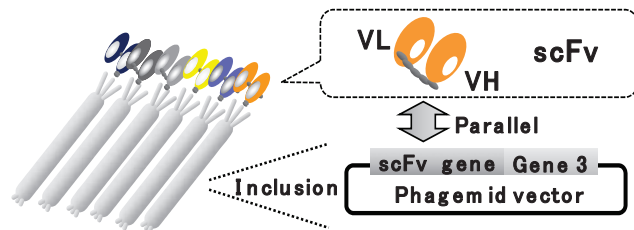As a result, we succeeded to get antibody phage clones which have specific affinity to the tumor vessel antigen.

Fig: scFv phage display system