RESEARCH

Our research focuses on the investigation of molecular basis of human cancer, aim to improve treatment strategies and ultimately patient survival. The team has deciphered liver cancer expression profiles and metastasis associated genes [1,2]. Continuation research included identification of potential therapeutic target, the novel growth factor granulin-epithelin precursor (GEP), and consolidated the roles on cancer growth, invasion, drug resistance, cancer stem cell properties and antibody targeted therapy [3-16].

Figure 1. Functional genomics approach [1,2,8]. Liver tissues and liver cancer tissues were examined using gene expression profiling [1,2]. The expression data were further analyzed by biostatistics and bioinformatics methods. The clinical implication for functional genomics includes expression finger printing of the multiple nodular tumors, identify novel biomarkers for prognostication and therapeutics development [3-16].
Figure 2. Targeted therapeutics GEP antibody combined with chemodrug cisplatin eradicated the intrahepatic liver tumors [12].
Figure 3. Binding properties of the growth factor GEP on the cell surface of liver cancers [13]. A) Confocal microscope images. B) Cell surface binding capacity for GEP. C) Neutralization of GEP by specific GEP monoclonal antibody A23 [7]. D) Competitive binding assays of GEP with different growth factors including EGF, PDGF-AA, PDDGF-BB and FGF-2.

RELATED REFERENCES (* CORRESPONDENCE):


