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강연제목: 의광학 연구 아이디어 사업화/Translational Biophotonics from Idea to Commercialization

Abstract:

This presentation will introduce various biomedical optics studies done and commercialized by “Biomedical Optics Lab” at Yonsei University for the last decade. 1) Functional facial color imaging modality is based on cross-polarization principle to utilize only diffused light by completely removing specular reflection from facial skin surface and therefore, to provide objective facial skin color information that can be used to compare therapeutic efficacy before and after treatment in dermatology. 2) Laser speckle contrast imaging (LSCI) modality provides the perfusion image of blood flow in which laser speckle contrast varies depending on blood flow velocity. It can be utilized to analyze blood flow variation in vascular related clinic issues such as burn, tissue implant, blood flow disorders, and so on. Commercial version of LSCI is ready to go market in a year. 3) Dual diffusing optical fiber probe was developed and commercialized for photodynamic therapy of pancreatic cancer. It was customized for endoscopic ultrasonography-guided 19-gauge needle catheter. The probe has the outer diameter of 600 μm including a customized optical fiber of 360 μm . In addition, other commercialization ready technologies will be briefly introduced as follows: single-channel 3D imaging modality, interstitial optical fiber probe, dual-modal imaging modality, and optical tissue clearing.

Brief Biosketch

- 2020.3~2021.3: 27 대한의용생체공학회 학술이사
- 2017.2~2019.1: 연세대학교(미래) 대외정책부처장
- 2014.3~현재: 대한의학레이저학회 연구이사
- 2013.9~2020.8: BK21Plus 사업단장(Bio Medical Wellness 융합 특화전문 인재육성 사업단)