

### Bioresponsive Behavior of Hydrogel for a Specific Target molecules

정윤아, 홍혜진, 이재상, 민지홍, 고원건<sup>†</sup>

연세대학교

(wongun@yonsei.co.kr<sup>†</sup>)

The continuous disease monitoring is getting more important to achieve accurate control of concentration of target molecules known as toxic and a serious disease-causing. In our work, molecules such as receptors, lectins or antibody were applied in hydrogel materials with chemical and biological response to target molecules were built. These 'smart materials' can change their properties in response to molecular recognition. Hydrogels are extensively hydrated and provide easy way to synthesize with molecules with polymerizable functional groups. Moreover, the gels can be dried for long term storage and reversibly used without loss of activity. When the hydrogels containing molecules exposed to target molecules, volume change can occur with interaction between molecules and target molecules. These responsive hydrogels can be used in various way by grafting molecules according to target molecules.