



Research Overview of Nano-Bioelectronics & Systems (NBS) Research Center

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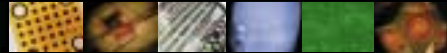
Nano-Bioelectronics & Systems Research Center
Seoul National University



Nano-Bioelectronics & Systems Research Center



NBS-ERC



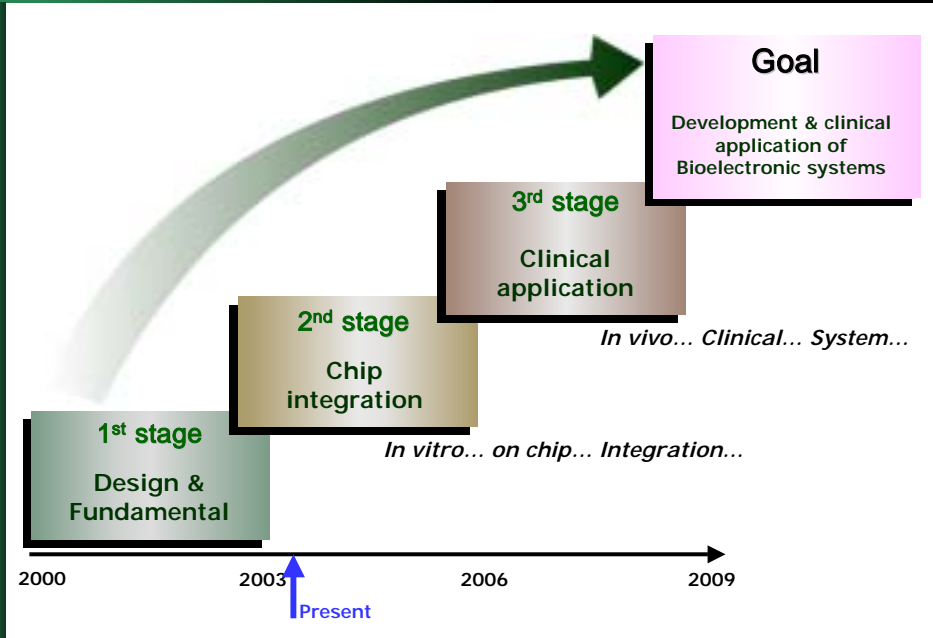
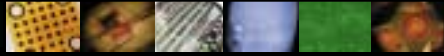
□ Goal

- Development and clinical application of bioelectronic systems using micro/nanofabrication technologies

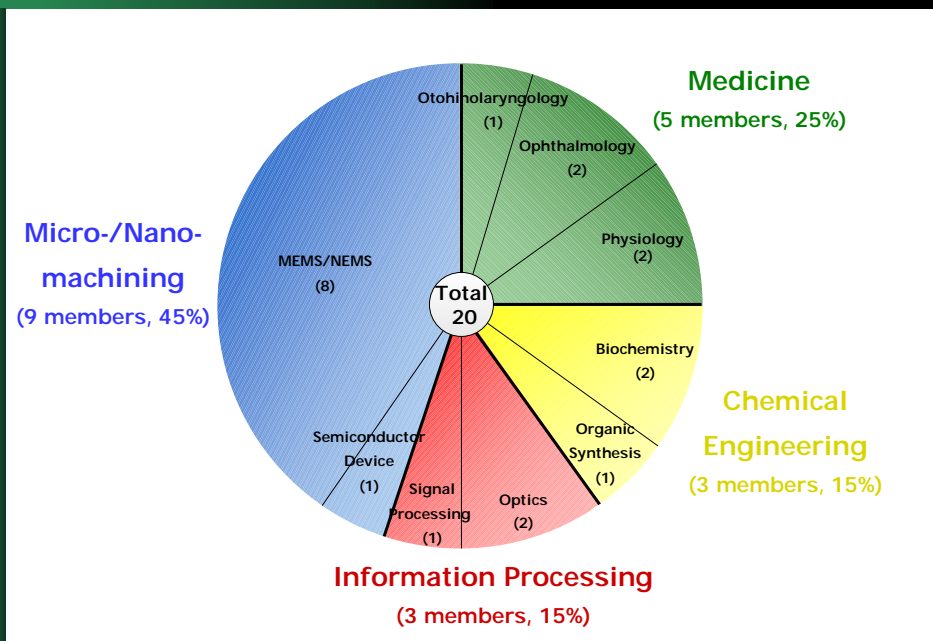
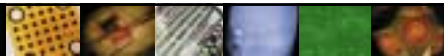
□ Center overview

- Engineering Research Center(ERC) supported by Korean Science and Engineering Foundation(KOSEF), Ministry of Science and Technology (2000.7 ~ 2009.2)
- Interdisciplinary Research Organization (BT+NT+IT)
- 20 professors, 80 Postdoc. & graduate students over 9 universities
- 4 companies – Industrial collaboration
- NBTC, CNF, Wadsworth Center - International collaboration with Bioengineering Program, Cornell University

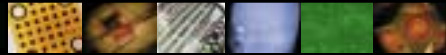
Stages



Members



Projects



□ Neural chip division (Neural prostheses).....11 professors

- Neural interface by neural probe using semiconductor process
- Retinal stimulator
- Brain-Computer interface
- Artificial olfactory sensing system
- Auditory cortex stimulation model through cochlear implant

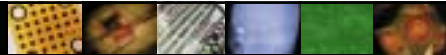
□ Cell chip division : Micro-FACS.....5 professors

- Microfluidic control for cytometry
- Flow-transfer device
- Optical characterization of cell structure/behavior
- Circuit integration & User-interface
- Micro-lens for optical detection

□ Protein chip division.....4 professors

- Micromachining for protein patterning & Optical detection system
- Biomolecular recognition & Surface modification

Contact



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