뇌-신체 상호작용 연구실

Brain-Body Dynamics Lab

이상준
교수

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Education

2020	Ph.D. in Neurobiology, California Institute of Technology (Caltech), USA
2014	B.S. in Biology, Gwangju Institute of Science and Technology (GIST), Korea

Professional Experiences

2024 ~	Assistant Professor, Department of Biomedical Science and Engineering, GIST, Korea
2020-2024	Post-doc, Pohang University of Science and Technology (POSTECH), Korea

LAB VISION

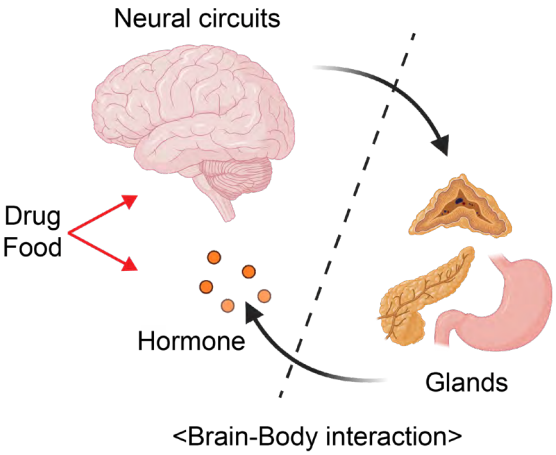
Our lab vision extends beyond exploring the neural basis underlying acquired behavior, with a special focus on defining behavior states, to bridging the gap between basic science and practical applications. We aim to deepen our understanding of the intricate mechanisms of behavior at the neural level and leverage this knowledge to develop innovative diagnostic tools.

MAIN RESEARCH AREA

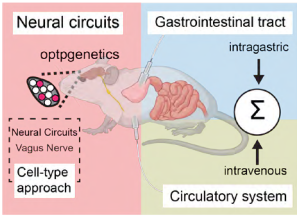
1. Intake behavior

2. Drug addiction

3. Imaging of brain-body interaction



<Brain-Body interaction>



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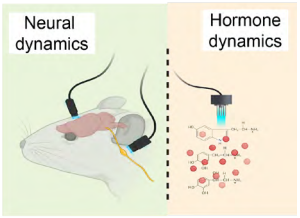

<Dynamics>

연구 성과

수행중인 주요 연구과제 (주요과제경력)

· POSCO TJ Science Fellowship (Postdoc, 2023)

주요논문 (대표실적)

· Chemosensory modulation of neural circuits for sodium appetite. ***Nature 2019***

· Neural Control and Modulation of Thirst, Sodium Appetite, and Hunger. ***Cell 2020***

융합연구 및 비전

The research in my lab will focus on understanding the interaction between endocrine signals and neural circuits, particularly how they influence repetitive behaviors including intake behavior. This includes investigating how hormones access the brain and affect neural gene expression and behavioral states, as well as examining the dynamic correlation between hormone levels and bodily information. My lab aims to unveil the complex interplay at the brain-body interface, enhancing our understanding of behavioral adaptations and potentially informing diagnostic and therapeutic interventions.

우리 연구실에서는 생체내 신호와 신경회로 사이의 상호작용을 이해하는 데 중점을 두고 있으며, 특히 섭취 행동에 대해 연구하고자 합니다. 호르몬이 뇌에 어떻게 접근하고 신경회로내의 유전자 발현 및 행동 상태에 어떤 영향을 미치는지, 그리고 호르몬 수준과 생체내 정보 간의 상관관계를 조사하는 것을 포함하고 있습니다. 우리 연구실은 뇌-신체 인터페이스에서의 복잡한 상호 작용을 밝혀내어 행동 적응에 대한 이해를 증진시키고 진단 및 치료제 개발을 목표로 하고 있습니다.