Molecular and neural mechanisms of fatigue and fatigue sensation --- For better recovery and better avoidance from exhaustion

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A variety of causes induce fatigue. There are commonality and diversity in the mechanisms of different types of fatigue. As many of the researchers suggested, neuro-immuno-endocrine interaction and neuroimmuno-psychiatric modulation are the central issues in the research on the mechanisms of fatigue. We feel fatigue in our brain, but the sense of fatigue has not been so highlighted before, unlike pain or fever, although fatigue is an indispensable bioalarm for us in analogy to pain and fever. Here, in this homepage, I would like to introduce the framework of our project “Molecular/ neural mechanisms of fatigue and fatigue sensation and the development of the way to overcome fatigue” (1999-2005) through Special Coordination Funds for Promoting Science and Technology from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Japanese Government, and the summary of our performances and results for the past four years.

Since the goal of our project is better prevention of fatigue and better recovery from fatigue, we have to make attempts to collect, assess, and invent the ways for those, in parallel with our efforts to explore the molecular and neural mechanisms of fatigue.

The project has been done by the members of researchers in various laboratories and institutions. The list of members is shown in Table 1 with their titles or themes of the research.