



International Symposium on Environmental Endocrine Disrupters 2001

Saturday, December 15 - Monday, December 17, 2001

パート 2

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パネルディスカッション

Panel Discussion

Environment and Doping

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In the field of elite sports, people are concerning about the substance of nandrolone. The substance is banned as an anabolic agent in the category of prohibited classes of substances in the Anti-Doping Code of the International Olympic Committee. Obviously, athlete-using nandrolone shall be sanctioned through doping control. Controversy is the result of positive tests of athlete who took food or some kind of supplements without nandrolone itself. Some top athletes taking these food or supplements have been kicked out of top scene of international sports with positive test results of nandrolone by the International Sports Federation. The topic involved national and international sports federations in the argument.

One of British National Federation planned a project for the issue and released a report that some athlete who took some food without nandrolone tested positive for the substance because of a metabolic process of some non-nandrolone substance. The report made the national federation conflict with the International Sports Federation. Problem is the environment which athletes are facing the situation, which make him take some food or supplements without knowing the risk.

Environmental endocrine disrupters problem and doping problem are similar in some respects that both problem are difficult to understand the situation and to find solution.

Environmental Hormones and Nonlinear Science

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Progress of nonlinear science in the latter half of the 20th century generated such new concepts as deterministic chaos and complex systems and made it possible to understand various phenomena in the real world as nonlinear systems [1-3]. In particular, since biological systems are typical examples of nonlinear systems, relation between life science and nonlinear science in research of the brain and the genome-proteome system is becoming deeper and tighter day after day.

In this panel discussion, I'd like to make comments on problems of environmental endocrine disrupters, or simply environmental hormones from the viewpoint of nonlinear science.

References

1. K. Aihara : "Chaos," Kodan-sha (1993).
2. K. Aihara (ed.) : "A new world opened by complex systems : the impact of complex systems on science, technology and society," Special issue of Nikkei version of Scientific American (1997).
3. K. Aihara : "Introduction to Chaos," Air University Press (2001).