

FOSTERING THE NEXT GENERATION

白眉 — The Hakubi Project

A Unique Opportunity for Outstanding Young Talent

The Hakubi Project was established by Kyoto University in 2009 to foster outstanding young researchers. The program recruits twenty international researchers per year as associate and assistant professors. It gives them a valuable opportunity to devote themselves entirely to their research. The project is open to any researcher in any academic field. **WEB** www.hakubi.kyoto-u.ac.jp/eng

MED-BIOL Temporal Regulation of Auditory Hair Cell Differentiation

Hedgehog signaling forms the basal-to-apical wave of hair cell differentiation in mammalian cochlea.

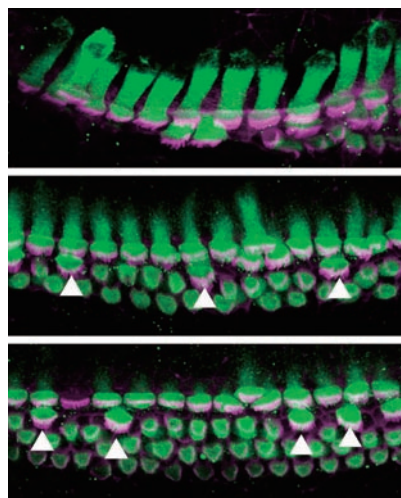
Mammalian cochleae are “snail-like” hearing organs in the inner ear, containing the sensory epithelium, called the organ of Corti, where mechanosensory hair cells are arranged in rows along the entire length of the cochlear coil. Hair cell differentiation proceeds from the basal to the apical region of the cochlea, but the mechanism and significance of this remain to be elucidated. Our colleagues and I investigated the role of Hedgehog (Hh) signaling in cochlear development using transgenic mice, and found that Hh signaling delays hair cell differentiation in the apical region, which forms the basal-to-apical wave of development. Downregulation of Hh signaling caused hair cell disarrangement and hearing impairment suggesting that the basal-to-apical wave is required for hearing ability.



Tomoko Tateya, MD, PhD

Assistant Professor, The Hakubi Center for Advanced Research / Institute for Virus Research

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Deformity of hair cell rows in the apical part of cochlea by downregulation of Hh signaling (arrow heads indicate abnormal hair cells)

ECON How to Pay for Our Health

Integrating scientific evidence and social values for future healthcare policy formulation.

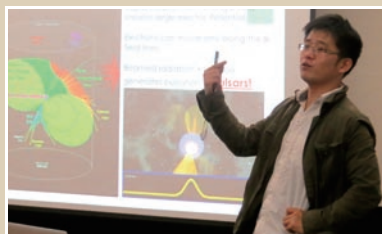
Total healthcare expenditure makes up nearly 10% of Japan's economy, and roughly 85% of universal healthcare is financed by social insurance and tax. Yet given the size of the national debt, it is



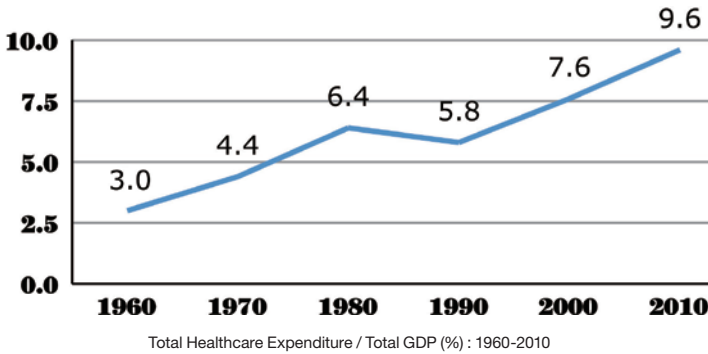
The Hakubi Seminar

Hakubi seminars are held at the Hakubi Center twice a month (on the first and third Tuesdays at 16:00), organized on a rotational basis by the Hakubi researchers themselves. These regular gatherings are attended by all Hakubi researchers. In April 2011, English became the official language for presentations and discussions.

WEB www.hakubi.kyoto-u.ac.jp/eng/03_sem/index.html



Dr. Takayuki Saito



impossible to meet all of society's healthcare needs, making the determination of budget priorities (taking into account both cost and effectiveness) a burning social issue. Medical research can provide scientific evidence regarding the degree to which specific technologies improve health. However, how much can and should our society be prepared to pay for these

solutions? Are there technologies which should be given higher priority than others? I am gathering data regarding social preferences in healthcare resource allocation, and anticipates that this information will make an important contribution to the healthcare policymaking process.

Rei Goto, MD, PhD

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FOR-HIDROL Post-modern Forestry

Why do we think in economic terms?

I am proposing a new concept of forestry. Japan has shown that modernization causes commercial forestry to stagnate, resulting in a degradation of forested areas. This can usually be explained economically, in the sense that forestry is no longer an attractive mode of employment due to rising standards of living resulting from modernization of society. Hence while typical research has focused on finding methods to make forestry economically feasible, I instead examine why people think economically, which was not as common before modernization. Examining differences between the times before and after modernization, I propose a new concept of forestry which may be feasible in this post-modern world.



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Oharame: Female firewood sellers from Ohara area in Kyoto before modernization. (From Kyoto University Digital Library: <http://edb.kulib.kyoto-u.ac.jp/exhibit/ishin/kanren/doc/big/0246006.html>)

What's in a Name?

The term hakubi (白眉), literally means 'white eyebrows' in Japanese (白 : white, 眉 : eyebrows). The word originates from a Three Kingdoms era (220-280 AD) Chinese legend: "Three kingdoms saga (三国志)." According to the legend, one of the kingdoms, called Shu (蜀), was home to five brothers with extraordinary talents. The fourth brother; 馬良季常 (Baryō Kijō), who was particularly outstanding, had white hairs in his eyebrows, and so the term hakubi has come to refer to particularly talented individuals.

