

The Okinawa Institute of Science and Technology Promotion Corporation is an independent administrative institution launched in September 2005 to conduct outstanding research and to prepare for the establishment of a graduate university of science and technology in Okinawa. OIST News is a print publication intended to highlight current activities at OIST.



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Members of the G0 Cell Unit

Principal Investigator: Dr. Mitsuhiro Yanagida (center)

The G0 Cell Unit, headed by Dr. Mitsuhiro Yanagida, was launched in April 2004 in Uruma City. A native of Tokyo, Dr. Yanagida became a professor of Kyoto University at the age of 36. Over the past 30 years, he has achieved excellent results in the research field of eukaryotic cell cycle, particularly the regulatory mechanisms of chromosome segregation. Dr. Yanagida is also widely known for his early works on fluorescence microscope observation of DNA, the first direct observation in the world. In the G0 Cell Unit at OIST, he aims to investigate the molecular mechanism of cell regulation in arrest and maintenance at non-dividing state out of cell cycle. In February this year, the unit underwent scientific review and was granted another five-year term of research. Dr. Yanagida spoke about the ongoing research project and his goals.

### ***Setting heart on science***

When I was a child, reading books on the lives and works of great scientists was a source of my aspiration. I was inspired by the profession that appeared free and creative. By the time I reached high school, I had set my heart on becoming a doctor or a life scientist. After studying molecular science in university, however, I became fascinated by genetics, particularly the mystery of how a chromosome is formed. Shortly before and after completing my Ph.D. study at the



Dr. Mitsuhiro Yanagida

University of Tokyo, I took up research positions at the University of Geneva, an institution in Naples, as well as at the University of Maryland. There, I studied genetics, a

field still new in Japan, and saw firsthand how foreign scientists conducted their research. These overseas experiences laid the life-long foundation for my scientific intellect.

### ***Serendipity drives research into exciting new field***

At Kyoto University, I had long studied about chromosomes of the fission yeast *Schizosaccharomyces pombe*. As I was nearing my retirement from the university in the spring of 2005, I decided to apply for research at OIST on a theme I had nurtured for nearly 10 years. Just like my project at Kyoto University, an OIST research project at that time was financed by the competitive research fund granted by the Japanese government. Since no two projects financed by the fund can be the same, I needed to choose an entirely different research topic from that in Kyoto: understanding the molecular mechanism of cell maintenance in the quiescent stage "G0".

### 1. G<sub>0</sub> phase of the cell cycle

Cells are the most basic unit of life. Cells grow and divide in an orderly fashion, in accordance with the cell cycle that consists of four distinct phases: G<sub>1</sub> (gap 1), S (DNA synthesis), G<sub>2</sub> (gap 2) and M (mitosis). G<sub>0</sub> phase is a period where cells exist in a quiescent state. More than 90% of human cells are at G<sub>0</sub> phase, including muscles, heart, nerves, and neurons. In our research unit, we are using fission yeast as a model organism to investigate how cells decide to arrest at the non-dividing state and how they resume cell divisions in response to changes in growth factors or nutrients.

### 2. Fission yeast — a perfect model organism for G<sub>0</sub> cell research

Under nitrogen starvation, fission yeast survives in the non-dividing state for a long period of time. Its adaptation strategy to a lack of nutrition is most easily understood when one looks at nature. For instance, when fission yeast replicates on top of grapes, where the amount of glucose is abundant and the nitrogen source is limited, fission yeast reuses nitrogen inside its cells when available nitrogen is exhausted. The opposite environment rarely exists in nature, where nitrogen is abundant but glucose is limited. Thus, in accordance with the law of nature, we deprive actively proliferating fission yeast cells of a nitrogen source by removing ammonium chloride from a synthetic medium. Using mutated fission yeast, we also look at how they respond to nitrogen starvation. Depriving fission yeast of other nutritional sources such as phosphoric acid or sulfur is possible, but that would make our research artificial. More importantly, fission yeast enters G<sub>0</sub> phase only when they are deprived of a nitrogen source.

A nutritional source for the human brain comes from blood. However, only low-molecular compounds such as glucose become the source since proteins cannot reach the brain. It is interesting to realize that the survival environments for the brain and fission yeast are quite similar. Although fission yeast can be found anywhere in the world, we need a "wild-type" strain for research, which contains no mutation. Such a standard strain was isolated more than half a century ago by Dr. Murdoch Mitchison, Professor of Zoology at Edinburgh University. By using the same wild-type strain, scientists have a level



Fission yeast colonies on agar media

playing field to base their research on, and to capitalize on the results of other scientists. This is actually the most important factor in research. Thanks to the works of our predecessors, we can make progress in science.

### 3. Finding clues to diseases of the 21st century

In both Japan and overseas, the number of requests I receive for my lectures on the research at OIST has become the same as that of my research in Kyoto. The number of requests I receive for reviews on my work in Okinawa has similarly grown. I sense an increasing degree of interest in our research at OIST since it is closely associated with the fast-developing medical field, and has the potential for use in applied science. Our research theme is closely related to senescence and the so-called metabolic syndrome, a group of risk factors linked to cardiac disease and diabetes. I believe research on these areas will show a lot of progress in the near future.



Observation through a microscope

Senescence is the state or process of aging. A leaf falling off a tree is leaf senescence. Does this mean that cells at G<sub>0</sub> phase are excluded from cellular senescence? To this day, I have studied about genes and the cellular mechanisms at a molecular level, using fission yeast as a model organism. Even if we succeed in identifying new genes that play a key role in senescence, this does not necessarily mean the work can be applied directly to humans. However, I am happy if medical scientists find our discoveries interesting and use them for applied science. Cancer was intensely studied in the 1960s and the 1970s. The study saw progress following a series of successes and failures in application of discoveries with model organisms to humans. A molecular biological approach to the diseases of the 21st century, including diabetes, obesity, and high blood pressure, is still in its infancy. That is why our research is exciting. As I work with fission yeast every day, I feel that our research may truly contribute to understanding the mechanism behind these diseases.

### *Contribution to development of Okinawa*

When I first heard about the OIST project several years ago, I felt that doing scientific research in Okinawa was a challenging, yet interesting effort, since the island has

historically been burdened with the downside of Japanese history. If the project succeeds, it will likely generate a new image of Okinawa. Our unit hosts an annual workshop, and experts from various fields gathered last April for "The 3rd International Workshop on Cell Division and Arrest" for discussion on the most advanced basic and applied scientific research related to this topic. Since Okinawa is isolated, a trip here is costly for foreign participants. However, the workshops have drawn a large number of participants because they are interested in seeing the environment in which OIST is doing research, and determining if the project will succeed. The success lies in all of us at OIST. Our unit

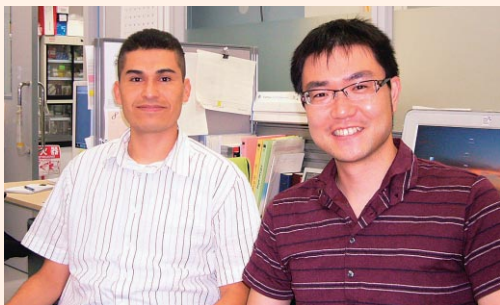
received a five-year extension of research following scientific review conducted last February. The unit has made steady progress thanks in large part to tireless effort of its members. We will see how the research will play out in the next five years.

The most exciting aspect of doing research is seeing unexpected people doing a great job. I am pleased to see such people finding meaning in their work and achieving great results irrespective of their backgrounds. Humans find a passion for something throughout their lives. Artists produce arts throughout their careers. To me, that passion has been in research.

## Promising Stars

Mr. Kenichi Sajiki, M.Sc.

Mr. Alejandro Villar Briones, M.Sc.



Mr. Villar Briones (left) and Mr. Sajiki

**Mr. Alejandro Villar Briones, M.Sc.**

Molecular biology is a completely new field for me, since my background is in electrical engineering. In the unit, I work with another technician from the Czech Republic to analyze data and develop software programs for the analysis. One subject of our analysis is composition of metabolome, obtained through mass spectrometry of cell extract samples of mutant strains of fission yeast. In the unit, we produce, screen and incubate the mutant strains to create the samples. Then, we use mass spectrometers to analyze the outcome of experiments using the samples. After the analysis, we obtain a lot of data that needs to be interpreted to find out what they mean. Since I am the last part of this entire, carefully-worked-out process, I feel a lot of responsibility. Although this is not the first time for me to work with researchers, the professionalism of each member of the unit is very high. I feel fortunate to work with a group of professionals. Currently, my colleague and I are building software to combine the outcome of comprehensive data analysis of various components of cells, including not only metabolome but also transcriptome and proteome, etc. This will enable extraction of data from the combined resource for further analysis. I hope to apply my expertise to high-level research of the unit. Living in Okinawa is comfortable and I am very happy to be in Japan.

Mr. Villar Briones was born and raised in Mexico. An electrical engineer with a master's degree in computer architecture, Mr. Villar Briones first arrived in Japan in 2004 on a one-year scholarship sponsored by Japan International Cooperation Agency (JICA). After receiving training in the field of electronics, Mr. Villar Briones returned to Mexico and worked there as the head of a department overseeing a production line at a computer-automated plant of a German pharmaceutical company. In 2007, he returned to Japan to marry a woman he had met during his JICA trainee years. Her transfer to Okinawa led to his joining the G0 Cell Unit in April 2008 as one of the key members tasked with data analysis and software development.

Mr. Kenichi Sajiki has been participating in the G0 Cell Unit as a doctoral student from Nara Institute of Science and Technology (NAIST). After graduating from the University of Wisconsin in the U.S.A. in 1997 with a bachelor's degree in genetics, Mr. Sajiki returned to Japan to work as an interpreter and staff member for the 1998 Winter Olympic Games in Nagano Prefecture. Following this international experience, Mr. Sajiki joined Chiba Prefectural Police to apply his expertise in DNA technology to forensic science. However, wanting to pursue research in life science again, he entered a master's degree program at NAIST in April 2004 and met with Dr. Yanagida, whose seminar in the winter of 2005 led to Mr. Sajiki's doctoral research in the G0 Cell Unit. With *OIST News*, Mr. Villar Briones and Mr. Sajiki each talked about their roles in the unit and future aspirations.

**Mr. Kenichi Sajiki, M.Sc.**

Science has always been around me because my mother is a researcher. In high school, I became interested in genetics after reading Robert Shapiro's *Human Blueprint*. Since then, I had dreamed of being involved in work related to this field, so I feel very fortunate to realize my adolescent dream today.

In the unit, my job is to identify essential genes for entry or maintenance of G0 phase, and to analyze their functions in G0 phase. To this end, we use a collection of 1,014 mutant strains of fission yeast created by random mutagenesis. In a nitrogen-starved environment, strains with mutated genes necessary for G0 entry or maintenance die. By identifying the mutation site and delving into functions of the genes, we would like to clarify the mechanism of G0 phase entry and maintenance. I hope my research helps to understand G0 phase.

Two years have passed by so fast since I joined OIST. Contrary to the student life at NAIST, the role of each member in the unit is so clear that I feel keenly aware of my responsibility. I am currently working on my Ph.D. dissertation for submission next spring, and I feel trained day by day. I would like to carry through my Ph.D. program by appreciating the opportunity of having this great research theme, environment, and colleagues.

## The 6th BOG Meeting



BOG members submit the Blueprint to former Okinawa Affairs Minister Kishida

The 6th meeting of the Board of Governors took place on July 28-30 at the OIST Seaside House in Okinawa and Hotel Okura Tokyo. In the meeting, board members discussed the blueprint for the new university, campus development as well as research and educational activities, including the outcome of a recent survey on international graduate universities. The main focus of the meeting was the discussion and approval of recommendations for the overall blueprint for establishing the new OIST graduate university. This was the culmination of over a year of planning by the OIST University Preparation Working Group and the BOG Working Group. At the conclusion of the three-day meeting, the summary document, the Blueprint, was formally submitted to then Minister for Okinawa Affairs and Fumio Kishida by Dr. Torsten Wiesel and Dr. Akito Arima. The Blueprint, which discusses both institutional issues and academic issues, will also be used by the Cabinet Office as a reference in drafting the legislation that will create the OIST Graduate University.

### Objectives

The objectives of the graduate university are to conduct world-class research and education in science and technology in order to contribute to self-sustaining development of Okinawa and to the academic advancement in science and technology and progress of social economy in the world.



BOG members visit the campus site

### Institutional Status

From the perspective of respecting the autonomy and the management flexibility, the graduate university will be established as a special school corporation. For the graduate university to become one of the best in the world, a mechanism will be created for the institution to receive substantial government subsidies.



### Administrative Structure

As the governing body of the graduate university, the Board of Directors will be the highest decision-making body of the institution and will make decisions on important issues, including establishing the by-laws and appointing the President, who is the chief executive officer.



(From left) President Brenner, Dr. Wiesel and Dr. Arima

### Educational and Research Programs

The OIST graduate education and research program should be cross-disciplinary and aims at being leading edge, including Life Science, Physical Science and Applied Science. The faculty will be international and the language of instruction will be English.

### Academic Programs

The academic program of the graduate university will be a doctoral program, and the degree conferred will be Ph.D.

The full text of the Blueprint is available on our Website : [http://www.oist.jp/doc/blueprint\\_En.pdf](http://www.oist.jp/doc/blueprint_En.pdf)

## G8 Science and Technology Ministerial Satellite Workshop on Environment & Energy Issues in Okinawa



Panelists

On June 14, 2008 OIST led a satellite workshop for the first Group of Eight (G8) ministerial-level meeting on science and technology. The workshop, titled "Environment & Energy Issues", was held at the University of the Ryukyus and was co-sponsored by the University of the Ryukyus, Academia Sinica, and Lawrence Berkeley National Laboratory, and supported by Okinawa Prefecture. Five speakers from OIST delivered lectures and participated in a panel discussion, including OIST President, Dr. Sydney Brenner, BOG members Dr. Akito Arima, Dr. Steven Chu, Dr. Yuan Tseh Lee, and Special Advisor Dr. Hiroaki Kitano.

### Lectures

#### Indispensable Usage of Nuclear Power and Pursuit of New Energy Sources Even with the Payment of Taxes

Dr. Akito Arima Chairman, Japan Science Foundation  
Co-chair, OIST Board of Governors

New energy sources are required to increase efficiency and decrease the environmental impact of power generation. Integrated coal gasification combined cycle, as well as carbon dioxide capture and storage, will be important. Solar energy and wind power can contribute, but their variable availability requires the development of cheaper and more efficient storage batteries. At least until 2050, when new, clean energy sources are expected to become more economical and stable, use of nuclear energy and further research on

nuclear fusion to generate power is indispensable. While the outcome of a recent IAEA survey suggests increasing public acceptance of the use of nuclear power generation, the safety and supply of nuclear fuel and the management of nuclear waste remains a key issue. For developed countries, we must promote the 3R project, which stands for "Reduce, Reuse, and Recycle," while pursuing the development of new energy sources, by using taxes.

#### The World's Energy Problem and What We Can Do About It

Dr. Steven Chu Director, Lawrence Berkeley National Laboratory  
1997 Nobel Prize in Physics, OIST Board Member

Government policies must accelerate the deployment of energy efficiencies and conservation, and stimulate the innovation of new energy technologies. This includes the use of carbon-neutral energy sources, construction of buildings that are five to ten times more energy-efficient, storage of CO<sub>2</sub> emissions in deep environmentally stable reservoirs, and development of low maintenance non-food plants for biofuel, such as Miscanthus, to replace current biofuel crops that compete for land and raw materials for food production. We also need transformative new scientific discoveries that can alter the entire landscape of energy demand and supply. One example is synthetic biology technology, which has been used to develop yeast that can produce a gasoline-like fuel. Another example is research to make artificial membrane systems that can undergo economically efficient photosynthesis.

#### Biological Approach for Global Energy and Climate Change Problems

Dr. Hiroaki Kitano Director, Sony Computer Science Laboratories, Inc.  
OIST Special Advisor

Global energy and climate are the most important problems facing mankind today. Multiple approaches are essential in solving these problems. There is no magic solution, but biological approaches are a critical component. These include the development and use of biofuels that do not compete with food crops, as well as the

## International Workshops and Seminars

OIST has been hosting international workshops and seminars to enhance cooperation with research institutions at home and abroad. These workshops and seminars also help introduce the vision of establishing a graduate university in Okinawa to the worldwide scientific community. Below is a list of workshops and seminars that took place between June and September, 2008.

**June 2 Biology, Levels and Learning Seminar Series** at OITC  
"Part III: Gene Regulation as an Adaptive Process"  
Speaker: Dr. Klaus Stiefel, OIST Organizer: Dr. Klaus Stiefel

**June 4 Biology, Levels and Learning Seminar Series** at OITC  
"Part IV: From Water to Cells"  
Speaker: Dr. Tony Bell, Redwood Center for Theoretical Neuroscience, U.C. Berkeley  
Organizer: Dr. Klaus Stiefel, OIST

**June 9 Biology, Levels and Learning Seminar Series** at OITC  
"Part V: Sensory Perception and Single Neuron Computation"  
Speaker: Dr. Klaus Stiefel, OIST Organizer: Dr. Klaus Stiefel, OIST

**June 11 Biology, Levels and Learning Seminar Series** at OITC  
"Part VI: From Spikes to Assemblies"  
Speaker: Dr. Tony Bell, Redwood Center for Theoretical Neuroscience, U.C. Berkeley  
Organizer: Dr. Klaus Stiefel, OIST

**June 13 Seminar** at OITC  
"Elephant shark genome provides insights into the evolutionary history of vertebrate genomes"  
Speaker: Professor B. Venkatesh, Institute of Molecular and Cell Biology, Biopolis, Singapore  
Organizer: Dr. Ichiro Maruyama, OIST

**June 13 OIST-IRP Internal Seminars** at the Research Laboratory  
"Intrinsic currents underlying the rebound depolarization in deep cerebellar nucleus neurons"  
Speaker: Dr. Thomas Sangrey, OIST

**June 13 OIST-IRP Internal Seminars** at the Research Laboratory  
"Bacterial Type III Secretion system"  
Speaker: Dr. Vladimir Mescheryakov, OIST

**June 16-July 3 Okinawa Computational Neuroscience Course (OCNC) 2008** at Seaside House  
Organizers: Drs. Erik DeSchutter, Kenji Doya, Klaus Stiefel, Jeff Wickens, OIST  
URL: <http://www.irp.oist.jp/ocnc/2008/index.html>

**June 23 Seminar** at the Seaside House  
"Development and regeneration of hair cells share common functional features"  
Speaker: Dr. Snezana Levic, University of California-Davis  
Organizer: Dr. Klaus Stiefel, OIST

**June 30 Seminar** at the Research Laboratory  
"Functional roles of avian basal ganglia circuit in song plasticity"  
Speaker: Dr. Satoshi Kojima, Keck Center for Integrative Neuroscience, University of California, San Francisco  
Organizer: Dr. Kenji Doya, OIST

preservation and restoration of biodiversity. A key element, but often neglected, is the marine sphere that includes coral reefs and other aquatic life forms, which represent a new horizon of science. Healthcare issues may emerge associated with climate change that may require innovative solutions. OIST can be a player in this effort by striving for a carbon neutral campus, pursuing leading edge research on renewable energy, coral reef preservation and regeneration, systems biomedicine, and working toward creating a carbon neutral island in Okinawa.

## Awakening and Collaboration of Asian-Pacific Countries

Dr. Yuan Tseh Lee President Emeritus, Academia Sinica  
1986 Nobel Prize in Chemistry, OIST Board Member

In the last few decades, we have witnessed the process of the globalization of human society. However, we are still far from forming "one global community," and because of this, we are suffering the consequences. Environmental problems, such as the depletion of the ozone layer by chlorofluorocarbons and global warming trends caused by greenhouse gases, must be addressed on a global scale. Okinawa, centrally located in the Asian-Pacific region, is an excellent place to demonstrate how an isolated island can acquire clean energy. A goal for OIST could be to become an international center for exploring Asian-Pacific energy and environmental issues. In order for science and technology to solve the problems facing mankind in the 21st century, we must pay special attention to the roles played by science and technology in this "finite" and "half-globalized" world, and learn to work together beyond national boundaries.

## Panel Discussion

A panel discussion followed the lectures, with questions from the audience. Asked what government policies could be implemented realistically and quickly to help address various energy and environment issues discussed during the lectures, Dr. Chu proposed establishing economic fees for carbon dioxide emissions. Dr. Brenner stressed the importance of energy-saving efforts and public awareness of the issues and cited the example of stabilized energy use per capita in California since 1974, which was mentioned in Dr. Chu's presentation. Dr. Brenner also suggested a scaled cost



More than 350 people, including high school and university students, attended

structure for energy use with higher levels of use triggering higher rates. Dr. Kitano, in response to a question about what could be done to reduce deforestation in Borneo, which he had described as an unfortunate result of palm oil production as a biofuel, cited the negative effect of local poverty, as well as weak government regulation. He emphasized the need for developed nations to transfer new technologies to countries in need, so that they can prosper economically in harmony with nature. In response to a question about the risks and public perception of nuclear power generation, Dr. Arima suggested that if the first use of nuclear technology had been for power generation instead of as a weapon, the public would have a much different attitude. All of the panelists agreed on the need for a global effort to combat global warming and solve energy issues, and the importance of new science and technology discoveries to help achieve that goal.

## Presentation to G8 Ministers

After the workshop concluded, a summary report was presented by the panelists to the G8 science ministers and other delegates at Kariyushi Beach Resort in Onna Village. Dr. Steven Chu, who spoke on behalf of all panelists, concluded the presentation by saying that meeting the basic energy needs of the poorest people on this planet is a moral and social imperative that must be pursued in concert with sustainability objectives. To fulfill the goals, he recommended a dual strategy: to maximize energy efficiency and decrease energy use; and to develop new sources of carbon neutral energy. It was also emphasized that technologies for capturing and sequestering carbon from fossil fuels can play a central role in the cost-effective management of global carbon dioxide emissions. Lastly, conservation and development of alternative energy sources was emphasized to reduce future geopolitical conflict and economic vulnerability associated with oil and natural gas.



G8 science ministers and other delegates

**June 30 Seminar** at the Research Laboratory  
"Traveling waves in cerebellar cortex mediated by asymmetric synaptic connections between Purkinje cells"  
Speaker: Dr. Michael Hausser, University College London  
Organizer: Dr. Tomoyuki Takahashi, OIST

**July 4 Seminar** at the Research Laboratory  
"The relationship between glutamatergic and dopaminergic innervations of the striatum"  
Speaker: Professor Paul Bolam, University of Oxford  
Organizer: Dr. Gordon Arbuthnott, OIST

**July 7 Biology, Levels and Learning Seminar Series** at OITC  
"Part VII: Evolution of Nervous Systems"  
Speaker: Dr. Klaus Stiefel, OIST Organizer: Dr. Klaus Stiefel, OIST

**July 8 Biology, Levels and Learning Seminar Series** at OITC  
"Part VIII: On Samir Okasha's book, *Evolution and the Levels of Selection*"  
Speaker: Dr. Tony Bell, Redwood Center for Theoretical Neuroscience, U.C. Berkeley  
Organizer: Dr. Klaus Stiefel, OIST

**July 16 Seminar** at OITC  
"Fabrication and Application of Lab-on-a-chip system"  
Speaker: Dr. Richard Jongzen Huang, Huafan University, Taiwan  
Organizer: Dr. Ichiro Maruyama, OIST

**August 10-11 Workshop on Mechanism of Brain and Mind in Sapporo**  
Secretariat: The Neural Computation Unit, OIST  
URL: <http://brainmind.umin.jp/eng-sm9.html>

**August 11 Seminar** at the Research Laboratory  
"Statistical Physics for Traffic Flow Modeling and Simulation"

Speaker: Dr. Kun Gao, University of Science and Technology of China  
Organizer: Dr. Jonathan Miller

**August 14 Seminar** at the Research Laboratory  
"The Many Masters of a Single Slave - The case of the silkworm sex determination pathway"  
Speaker: Dr. Sathish Venkatesan, Center for DNA Fingerprinting & Diagnostics, India  
Organizer: Dr. Jonathan Miller

**August 15 OIST-IRP Internal Seminars** at the Research Laboratory  
"GABA<sub>B</sub> receptor variants fulfil distinct pre- and postsynaptic functions"  
Speaker: Dr. Rejan Vigot, OIST

"Developmental changes in presynaptic functions of calmodulin"  
Speaker: Dr. Takayuki Yamashita, OIST

**August 19 Seminar** at the Research Laboratory  
"Quantum Phases of Matter"  
Speaker: Dr. Dennis Dickerscheid, JSPS Postdoctoral Fellow, The University of Tokyo  
Organizer: Dr. Jonathan Miller

**September 12 OIST-IRP Internal Seminars** at the Research Laboratory  
"The search for new components of Hedgehog signaling in *Drosophila*"  
Speaker: Dr. Chiemi Miyagi, OIST

"Clinical Study of ADHD - Implications for Science and (especially little) Humans"  
Speaker: Dr. Emi Furukawa, OIST

**September 16 Seminar** at the Research Laboratory  
"Decision and performance interactions in stroke recovery"  
Speaker: Dr. Nicolas Schweighofer, University of Southern California  
Organizer: Dr. Erik De Schutter

## Visit by Participants of the Asia Youth Exchange Program

On August 18, participants of the Asia Youth Exchange Program visited the IRP site to see firsthand research activities of OIST. The three-week program, sponsored by the Japanese government, aimed at fostering innovative people by inviting young people from Okinawa, mainland Japan and other Asian countries to share experiences and participate in discussions on various regional and global issues. In a two-hour tour at OIST, one group visited the Neural Computational Unit led by Dr. Kenji Doya and the Neurobiology Research Unit headed by Dr. Jeff Wickens, while the other group visited the Developmental Signalling Unit led by Dr. Mary Ann Price and the Developmental Neurobiology Unit headed by Dr. Ichiro Masai. Ms. Ranata Chour, a 16-year-old student from Cambodia, said this was her first time abroad and away from her family. Referring to the impact of climate change and the coral reef issue in Okinawa, Ms. Chour said she would like to tell her family and classmates about what she had learned in Okinawa.



Participants of the Asian Youth House Program



Dr. Price shows Drosophila samples to students

## Visit by Then Minister Motoo Hayashi

Mr. Motoo Hayashi, former Minister of State for Okinawa and Northern Territories Affairs, Disaster Management, visited the main campus construction site on August 11. Following Executive Director Dr. Robert Baughman's explanation about the campus construction plan, Minister Hayashi pledged continued government support for the OIST project.



(From left) Dr. Baughman, Former Minister Hayashi, and Okinawa General Bureau Director-General Mr. Takehiro Fukui

## Main Campus Update

Construction of Laboratory 1 and the Center Building is underway, with their initial use envisioned for FY2009. The extent of progress on construction of the main campus in Onna Village can be viewed on our Website, along with the latest activities at OIST. <http://www.oist.jp>



Construction of Laboratory 1

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