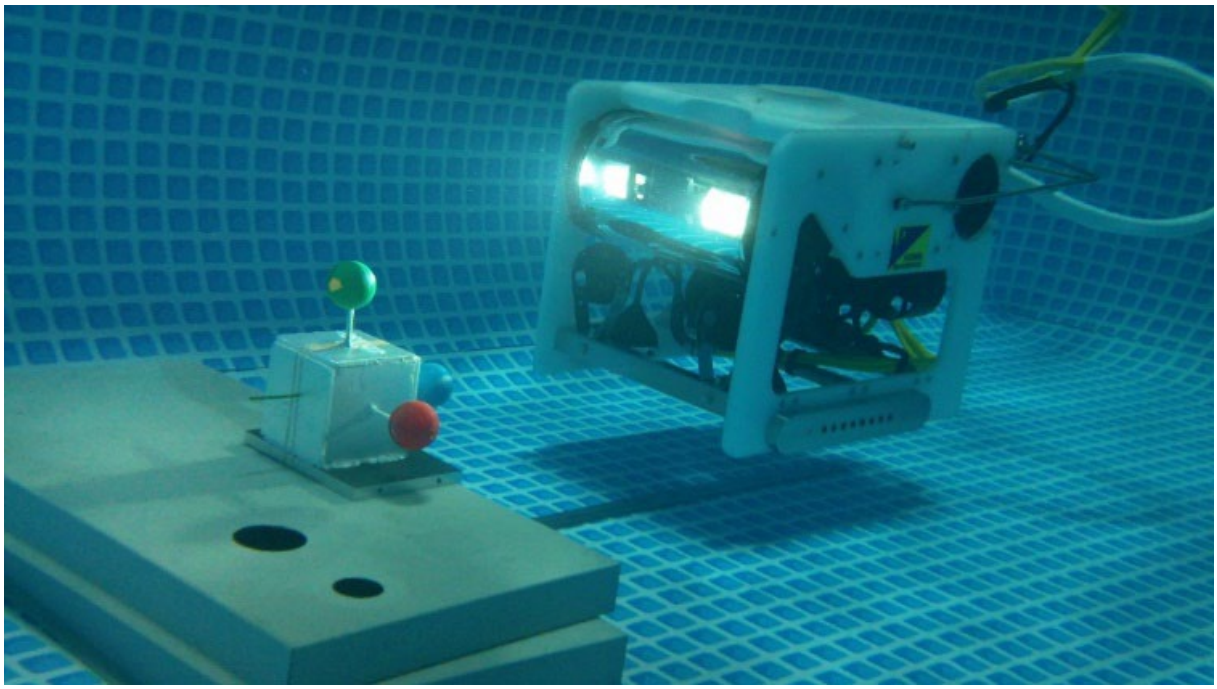
OKAYAMA UNIV. e-Bulletin



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1-1-1 Tsushima-naka, Kita-ku, Okayama 700-8530 Japan

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News

Successful completion of a contralateral lung transplant using a donor lung from a brain-dead donor: a first in Japan

Okayama University Hospital has successfully completed a contralateral lung transplant in which a left lung from a donor was transplanted in the right lung cavity of a man in his 60's with idiopathic interstitial pneumonia on July 3rd 2014. The donor was a woman in her 50's, and the organ was provided by Osaka General Medical Center.

Contralateral lung transplantation using the lung of a brain-dead donor conducted by Oto and others

Earlier this year, in March, another contralateral lung transplant between living subjects was conducted at Kyoto University Hospital. However, the surgery conducted at Okayama University Hospital in July was the first transplant using a lung from a brain-dead donor.

The transplant operation was conducted between 9:32 am and 4:32 pm on the same day with approximately 30 surgical staff including Takahiro Oto, a thoracic surgeon at Okayama University Hospital. The recipient man was diagnosed with idiopathic interstitial pneumonia, registered with the organ transplant network in October 2012, and was waiting for a donor.

In an interview after the transplant, Oto and the others explained: "The right lung of the patient needed the transplant; however, what a left lung was provided. We could have abandoned the plan due to medical reasons, but the possibility of this being the last chance for a transplant for this patient was high. We expect the patient to be able to leave the hospital in 3 months if he makes a smooth recovery."

With the success of this transplant, the medical staff anticipate an increase in the number of opportunities for providing organs to other patients suffering from severe lung diseases.

News

Okayama Study Tour to Discover the Charms of Okayama from the Perspective of Foreign Students

The Academic and General Okayama University Regional Research Association (AGORA) held an Okayama Study Tour on July 12, in which foreign and Japanese students visited Koraku-en and Okayama Castle, and discussed their charms or ways they could be improved.

A total of 49 foreign students, Japanese students, volunteers and staff participated. They were split into five teams and enthusiastically observed the sites, carefully checking the guidance and displays given as well as the convenience of the facilities. During their workshop they discussed the charms of the facilities and points for improvement. The foreign students made comments such as: "I was fascinated by the bamboo varieties which we don't have in the West," "There's a lot of difficult Japanese explanations for foreigners," and "There aren't many explanations in foreign languages," while expressing their appreciation in being able to find new discoveries in both Koraku-en and Okayama Castle. Lastly, Vice-president Masaru Araki gave each participant a completion certificate.

The tour is part of the Foreign Student Exchange Center Initiative (Ministry of Education, Culture, Sports, Science and Technology) and was held with the cooperation of the local government and the Okayama Convention Center. Further events are planned for the future to improve the charms of Okayama as an international city.

Participants walking through Koraku-en

Workshop where the charms of the facilities and other points were discussed

Participants presenting the results of their discussions

Participants of the Okayama Study Tour

News

Professor Wirth, from Cardiff University in the UK, presents a lecture at Okayama University's 'Future Session'

In order to deepen international joint research in the field of organic chemistry, our university invited Professor Thomas Wirth from Cardiff University in England, UK, to present at the "15th Future Session" in Building No.1 of our university's engineering department on June 24th 2014.

Professor Wirth, who is active in the field of organic chemistry, is a world expert in flow chemistry and organic synthesis methodology. He pioneered a groundbreaking hypervalent iodine organic synthesis method, involving the continuous pouring of solution. He is also very knowledgeable about Japan. Given that Professor Wirth was already visiting Japan to participate in the "4th International Conference on Hypervalent Iodine Chemistry (ICHIC2014)" held in Narita City of Chiba Prefecture, we set up an invitation lecture at our university. Professor Wirth gave a presentation about his wide-ranging research which included the most recent findings related to synthetic organic chemistry. Professor Wirth then led an active discussion with approximately 70 teaching staff and students.

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Professor Wirth lecturing about the latest research activities

Professor Wirth talking with participants

Professor Wirth and our university's teaching staff

News

Selection as part of the 'Top Global University Project'

Okayama University's program for educational reform, known as the "PRIME Program: producing practical-oriented human resources in a global community", has been selected for support under the Ministry of Education, Culture, Sports, Science and Technology (MEXT)'s 'Top Global University Project'.

The project seeks to put the reform of university education and internationalization into practice, supporting the development of educational environments to become internationally aligned, and thus internationally competitive, universities. The project will be implemented for up to 10 years starting this year.

Okayama University was the first national university to adopt entrance tests for an international baccalaureate in 2012, as well as opening a special course for global human resource development in 2013. These and other reforms have worked toward our internationalization. This April, the university appointed an executive director and vice president (specifically for university reform) and president's aides, to accelerate and strengthen such efforts still further. Under support from this project, the university shall foster human resources able to act decisively at the top of the global market. These personnel will help promote the so-called '3x3 education' program in every department of the university, wherein the students acquire the three core powers of liberal arts strength, linguistic ability and professional knowledge, as well as experiencing inter-disciplinary, inter-societal and inter-cultural skills.

More details of the PRIME Program can be found on the following website (Japanese only):
http://www.okayama-u.ac.jp/buildandrenovate/

News

Okayama University selected as an additional MEXT 'Translational Research Network Program' research support site

On September 5, 2014, Okayama University was selected as an additional research support site for the Ministry of Education, Culture, Sports, Science and Technology (MEXT)'s 'Translational Research Network Program'.

This program supports translational research, applying the results of core research in life sciences into practical medicine. It seeks to form an organizational structure to create Japanese-led innovative pharmaceuticals, medical equipment and related technologies based on a comprehensive process from core research to practical realization.

Under the title of the 'Next Generation Translational Research Support Site for Extending Healthy Life Expectancy', Okayama University will establish a translational research site able to meet diverse needs in areas such as medicine, dentistry, and nursing care appropriately. It will also focus on research and development in new medical fields created because of Japan's aging society.

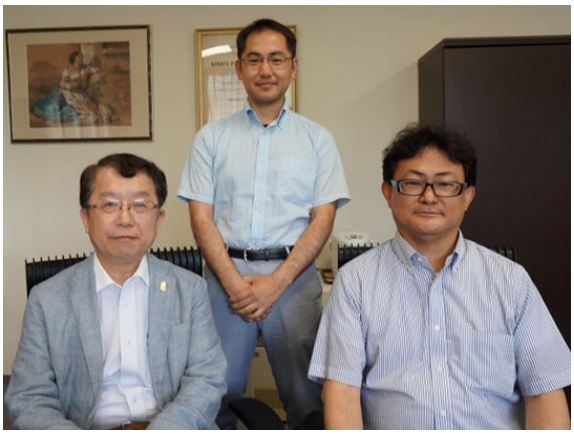
Translational Research Network Program(Japanese only) :
http://www.mext.go.jp/b_menu/boshu/detail/1351729.htm

News

Selection as a Center for Excellence

On June 27, 2014, Okayama University was selected as a Center of Excellence for the Innovative Technology Promotion Project (Interdisciplinary Research) by the Ministry of Agriculture, Forestry and Fisheries.

Agriculture, forestry, fishing, and food industries have various research areas which border other academic fields, including medical science, engineering and science. As such, the project aims to create innovative technology through an interdisciplinary approach.



From left to right: Executive Director Yamamoto (CPD), URA Satoh (CPM) Prof. Sera (Research Representative)

Okayama University is working to form a consortium with a number of companies. The theme of this joint initiative will be the "establishment and implementation of leading, innovative technology which inhibits virus replication with the use of artificial nucleic-acid-binding proteins". Prof. Takashi Sera of the Graduate School of Natural Science and Technology, Okayama University, has been appointed as the project's research representative. The project targets i) the development of a novel design method of artificial RNA-binding proteins which recognize RNA viruses, ii) the development of protein-based anti-influenza drugs, iii) the creation of virus-resistant wheat, and iv) the establishment of high-sensitive detection technology based on immunochromatography which is often used as a rapid virus test kit.

Okayama University Executive Director and Vice President in charge of research, Professor Shinichi Yamamoto, acts as a Consortium Program Director (CPD: Project head). Norito Satoh, research administrator, serves as Consortium Program Manager (CPM: Management of Research Administration). The university collaborates closely with the Program Officer at the Bio-oriented Technology Research Advancement Institution (BRAIN) which is one of the National Agriculture and Food Research Organization (NARO)'s research centers. The university will proceed with research and implementation strategically.

Okayama University has an excellent record with regard to interdisciplinary research and operates a research core for interdisciplinary sciences. In addition, it is one of the institutions chosen to receive support under the Ministry of Education, Culture, Sports, Science and Technology (MEXT)'s program for promoting enhanced research universities. Furthermore, it has a university hospital, which has

been chosen as a 'clinical study core hospital' by the Ministry of Health, Labour and Welfare (MHLW). Similarly, the Institute of Plant Science and Resources (IPSR) has been selected as a joint usage / research center by the MEXT. Okayama University is the only research institution in Japan which has these three strongholds in fields of agriculture and plants. Okayama University aims to utilize this strength to a maximum extent so that it can create innovative technologies.

[Enquires]
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Feature

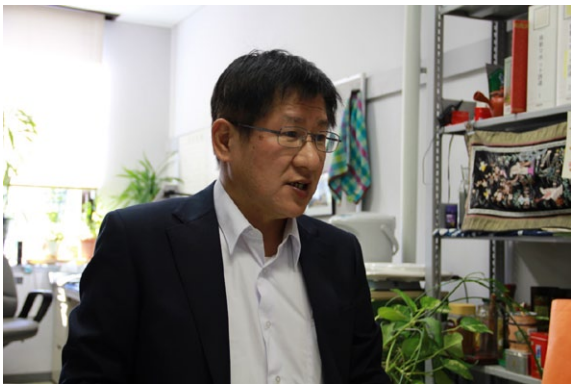
Intelligent deep sea robotics: Autonomous underwater robot with intelligent 3D cameras for high precision search and tracking in deep seas

Okayama University researchers in collaboration with industrial partners have developed an innovative underwater robot incorporating intelligent three-dimensional object recognition CCD technology for autonomous search and tracking operations over long durations of time in open water.

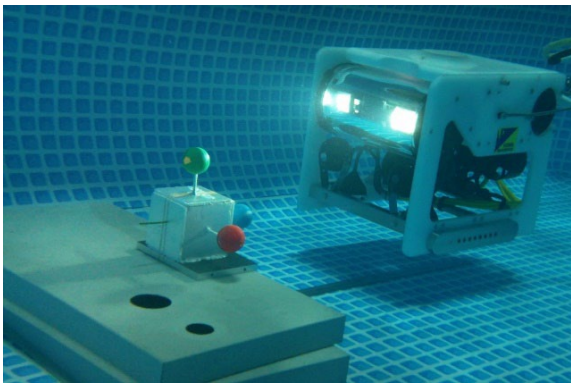
"Our Autonomous Underwater Vehicle (AUV) operates using the combination of our new 'Move on Sensing' (MOV) three dimensional visual servo CCD technology with real-time stereopsis and detection of conventional sonar signals," explains Mamoru Minami, professor at the Graduate School of Natural Science and Technology, Okayama University. "Underwater navigation with this combination of sound and 3-D visual servo feedback enables our AUV to search, track, and pinpoint targets with a precision of 5 mm. We expect this accuracy to improve this figure to 0.5 mm, which we have obtained using ground based robots."

The Okayama University MOS/AUV is expected to find applications in areas including decontamination of radiation contaminated the floors of seas, oceans and lakes; exploration of ocean floors for materials such as methane hydrate and rare earth metals; maintenance of underwater telecommunications cables; environmental monitoring and surveys of marine life; underwater mines; recovering space debris; and lifesaving.

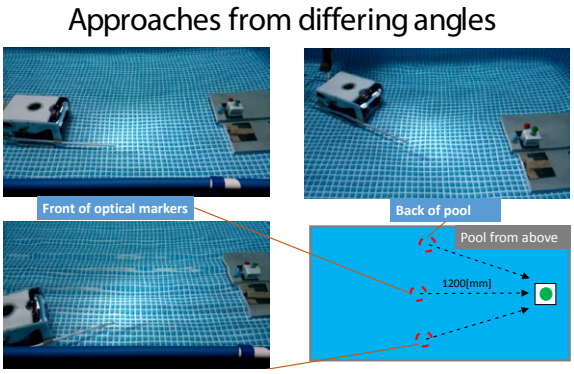
The prototype MOS/AUV was tested in an experimental pool of water measuring 2 m long, 3 m wide and x0.75 m deep. The MOS/AUV successfully docked with a



Professor Mamoru Minami Graduate School of Natural Science and Technology, Okayama University



The MOS/AUV underwater robot approaching a target represented by coordinate system with three colored balls.



The MOS/AUV robot successfully navigated to the target from different starting points and completed a connecting task of a rod with a tube set beside the 3D marker.

target consisting of a hole measuring 7 cm in diameter designed to simulate a recharging base for the robot for simulating charging task of the battery on the AUV. “The two CCD cameras of the MOS visual servo system are located at the front of the robot to track ‘optical induction markers’ emitted by light sources on the target”, says Minami. “We use genetic algorithms (GA) to match the CCD images with 3D models of the target to dock with the target. Ultimately, we do not need to dock to recharge. We could use induction based recharging that we enable much easier operation over long periods of time.”

Notably, the robot moves autonomously taking into account changes in the position of the target, with the capability of tracking targets moving at speeds of up to 10 mm/sec.

“We can envisage applications not related to underwater activities,” says Minami. “For example docking space vehicles and using autonomous robots to build bases on the Moon. It’s a really exciting invention with many applications.”

The MOS/AUV is being developed with Kowa Corporation, a company based in Osaka, Japan, specializing in underwater equipment.

Further information

1. Website of Professor Mamoru Minami, Graduate School of Natural Science and Technology, Okayama University: http://www.suri.sys.okayama-u.ac.jp/
2. Illustrative videos of the MOS/AUV underwater robot approaching a target:
   Y-axis rotation visual servo: https://www.youtube.com/watch?v=A7vBh48WRiI
   Fitting diagonally back: https://www.youtube.com/watch?v=yimpXX_8bck
   Fitting diagonally front: https://www.youtube.com/watch?v=j6XptOUVH7U
   Fitting front: https://www.youtube.com/watch?v=uIpXnGb4fYs
   Depth visual servo: https://www.youtube.com/watch?v=1CxSYjCfhno
   Vertical visual servo: https://www.youtube.com/watch?v=_Ct5wmnX3Xk
   Fitting viewed from the underwater robot: https://www.youtube.com/watch?v=6FdCFJogY2Y
   Fitting viewed from the hole on the fitting side: underwater robot: https://www.youtube.com/watch?v=_4NZ63xJyOA
   Horizontal direction visual servo: https://www.youtube.com/watch?v=hPCSptluloE
   First attempt from the front: https://www.youtube.com/watch?v=HhUQeVn-e3I

[Enquires]

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Research Highlights

A toxic environment: Life in the seas affected by high-tech industries

The large-scale manufacture of LCD screens could have a significant toxic effect on aquatic organisms, state scientists at Okayama University. The combined toxicity of chemicals deposited in the environment during production severely affects micro-crustaceans – the effects on other organisms are yet to be determined.

The manufacture of thin film transistor liquid crystal displays (TFT-LCDs), used for television screens, computer monitors and mobile phone screens, has increased dramatically over the past twenty years. The volume of toxic chemical compounds discharged into the environment from TFT-LCD manufacturing has also risen significantly, but little is known about the impact of this pollution on living organisms.

Now, Izumi C. Mori and colleagues at Okayama University, together with scientists across Japan and Malaysia, have demonstrated the toxic effect of these chemicals on four aquatic organisms – the fish *O.latipes*, the micro-crustacean *D. magna*, the alga *P.subcapitata*, and the bacterium *V.fischeri*. Micro-crustaceans appear to be especially susceptible to toxicity – this could lead to a significant imbalance in the ecosystem as they have a predatory role.

The team investigated the effects of three main chemicals used in the process of making TFT-LCDs: solvents called tetramethylammonium hydroxide (TMAH), known to cause heart disease and respiratory failure in animals, iodine / potassium iodide solution (KI), and dimethyl sulfoxide (DMSO). The combined toxicity of these chemicals is unknown.

Mori and his team found that the micro-crustaceans were highly affected by the toxins, particularly TMAH. Both TMAH and KI are regularly produced by the same factories and released into the same water bodies. The researchers believe the combined toxicity of both chemicals would cause a three-fold increase in toxicity in micro-crustaceans. With TMAH and KI both highly water-soluble, the team also urge immediate research into the effect of combined chemicals on planktonic species.

Publication and Affiliation

Izumi C. Mori[a], Carlos R. Arias-Barreiro[a], Apostolos Koutsaftis[a], Atsushi Ogo[a], Tomonori Kawano[b],Kazuharu Yoshizuka[b], Salmaan H. Inayat-Hussain[c], & Isao Aoyama[a]. Toxicity of tetramethylammonium hydroxide to aquatic organisms and its synergistic action with potassium iodide. Chemosphere **120** 299-304 (2014)

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- Authors: Mori Izumi C, Arias-Barreiro Carlos R, Koutsaftis Apostolos,Ogo Atsushi, Kawano Tomonori, Yoshizuka Kazuharu, Inayat-Hussain Salmaan H, and Aoyama Isao
- Title of original paper: Toxicity of tetramethylammonium hydroxide to aquatic organisms and its synergistic action with potassium iodide
- Journal, volume, pages and year: Chemosphere 120, 299-304 (2014).

http://ousar.lib.okayama-u.ac.jp/metadata/52905

Research Highlights

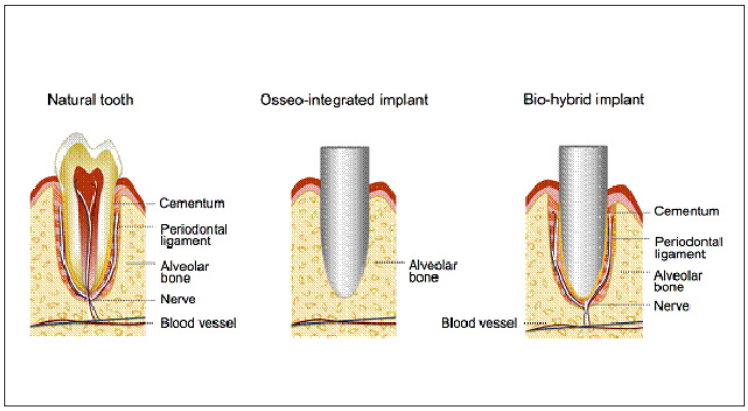
Bio-hybrid implants: Restoring organ functions

Our bodies function thanks to the smooth integration of different organs within the surrounding tissues. One challenge of creating artificial organs is to mimic the comprehensive organ function. Bio-hybrid implants are the way to go, but so far they have not been able to fully integrate into the living tissue and perform the same functions as real biological organs. Now Takashi Tsuji and collaborators at several institutions in Japan have developed a bio-hybrid dental implant that restores the physiological tooth functions by using a conventional dental implant and dental follicle stem cells as a bio-hybrid organ.

The team used a hydroxyapatite-coated titanium implant and dental follicle stem cells extracted from embryonic tooth germs. They then studied the integration of this bio-hybrid implant into the tooth loss region with different microscopy techniques and demonstrated the regeneration of periodontal tissues comprising cementum, periodontal ligament and alveolar bone.

Tsuji and his colleagues found that the bio-hybrid implant essentially acts as a fully functional organ *in vivo*. The implant can respond to mechanical stress and perceive noxious stimuli. It also restores other physiological functions such as bone remodelling and regeneration of critical bone-defects.

There is still a way to go to clinical applications, but the new bio-hybrid implant represents a significant advance in the development of the next-generation therapeutic treatments for tooth loss.



A model of the connection of a bio-hybrid implant to the periodontal tissues. The schematic representation of the natural tooth shows the osseo-integrated implant and bio-hybrid implant. The bio-hybrid implant restored physiological functions, including bone remodelling, regeneration of severe bone defect and responsiveness to noxious stimulations, through the periodontal tissue regeneration.

Publication and Affiliation

Masamitsu Oshima[1], Kaoru Inoue[2,3], Kei Nakajima[2,4], Tetsuhiko Tachikawa[5], Hiromichi Yamazaki[2], Tomohide Isobe[5], Ayaka Sugawara[2], Miho Ogawa[1,6], Chie Tanaka[2], Masahiro Saito[2], Shohei Kasugai[7], Teruko Takano-Yamamoto[3], Takashi Inoue[4], Katsunari Tezuka[1,6], Takuo Kuboki[8], Akira Yamaguchi[9] & Takashi Tsuji[1,2,6]*

Functional tooth restoration by next-generation bio-hybrid implant as a bio-hybrid artificial organ replacement therapy, Scientific Reports 4:6044 (2014) DOI: 10.1038/srep06044

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• Title of original paper: Functional tooth restoration by next-generation bio-hybrid implant as a bio-hybrid artificial organ replacement therapy
• Journal, volume, pages and year: Scientific Reports 4, 6044 (2014).
http://ousar.lib.okayama-u.ac.jp/metadata/52907

Research Highlights

Seed germination regulators: all in the timing

The timing of seed germination is crucial for optimising harvests. Pre-harvest sprouting is prevented when seeds enter a dormant state, but a high level of dormancy has economic repercussions. Now, using RNA and sequence analysis and comparisons with other plants, researchers at Okayama University have unravelled some of the mechanisms regulating seed maturation and dormancy in wheat.

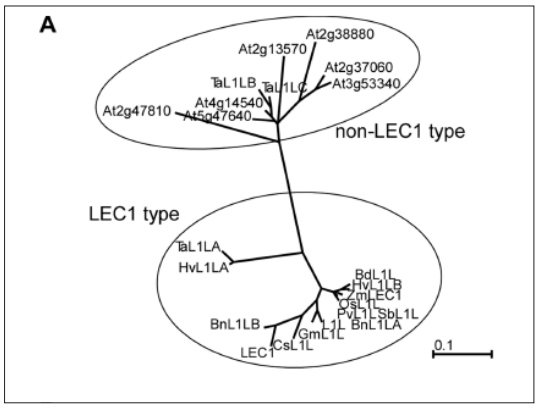

Figure caption: Unrooted phylogenetic (or evolutionary) tree showing the relationships between species. Trees were constructed from the deduced amino acid sequences of the domains of the proteins LEC1 type (a regulator of seed maturation in Arabidopsis), non-LEC1 type and their orthologues - genes in other species sharing the same ancestry. Scale bars represent amino acid substitutions per site.

Studies of arabidopsis - a small flowering plant related to cabbage and mustard – have identified transcription factors that regulate its seed maturation and dormancy. However few studies have yet investigated seed maturation regulators in wheat, or monocots in general. Monocots – plants with one seed leaf as opposed to dicots, which have two – include rice, wheat, maize, sugar cane, pasture grass and bamboo, so they are particularly economically significant.

Kazuhide Rikiishi and Masahiko Maekawa grew seedlings of nine varieties of wheat. They harvested the seeds every 10 days until 60 days after pollination, and incubated the seeds on petri dishes. They then counted the number of seeds on each petri dish each day to monitor germination, and analysed the RNA of samples at different stages after pollination.

The researchers found genes specific to certain tissues and stages of development that were similar to the seed maturation regulators reported for Arabidopsis. They also showed how these genes affect seed dormancy in wheat and the pathways for regulating seed dormancy.

Cereal seeds with low dormancy are now used regularly to boost production and pre-harvest sprouting has become an increasingly troubling issue. The authors conclude in their report, “The regulatory networks of seed maturation might be conserved for the control of seed dormancy in dicot and monocot species.”

Publication and Affiliation

Kazuhide Rikiishi*, Masahiko Maekawa Seed maturation regulators are related to the control of seed dormancy in wheat (*Triticum aestivum L.*) *PLOS ONE, 9*, e107618. (2014).

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- Authors: Rikiishi Kazuhide, Maekawa Masahiko
- Title of original paper: Seed Maturation Regulators Are Related to the Control of Seed Dormancy in Wheat (Triticum aestivum L.)
- Journal, volume, pages and year: PLoS ONE 9(9), e107618 (2014).

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Research Highlights

Arsenic toxicity: Reducing accumulation in rice grains

Arsenic is a highly toxic element derived from both natural and human sources, the accumulation of which can trigger cancer and skin diseases in humans. A key human health concern is the contamination of drinking water and soils with arsenic, a phenomenon which is particularly prevalent in South and South-East Asia where rice is grown in contaminated water and soils. Rice plants are particularly good at absorbing arsenic, and the chemical accumulates heavily in the rice grains, subsequently transferring to the food chain.

Scientists at Okayama University have uncovered a protein naturally found in rice which could help limit the amount of arsenic absorbed by rice plants from water and soils. Their research could lead to a way of limiting arsenic accumulation in the food chain.

Now, Jian Feng Ma and co-workers at Okayama University, together with scientists in Korea and Switzerland, have identified a transporter protein in rice called OsABCC1 which appears to restrict the accumulation of arsenic in rice grains, suggesting a strategy for limiting arsenic accumulation.

Ma and his team focused on phloem cells found in the plant's nodes, where arsenic accumulates from the root system before being transferred to the grains. Through a series of experiments, the researchers found that knocking out OsABCC1 gene resulted in 13-18 times more As accumulation in the grains, indicating that this transporter played a vital role in limiting arsenic accumulation in the grains.

In this way, OsABCC1 also protects future generations of the rice plants, which can be grown from grains with lower arsenic levels. Over-expression of OsABCC1 could generate rice plants with high arsenic-tolerant and low accumulation in future.

Publication and Affiliation

Won-Yong Song[a], Tomohiro Yamaki[b], Naoki Yamaji[b], Donghwi Ko[a], Ki-Hong Jung[c], Miho Fujii-Kashino[b], Gynheung An[c], Enrico Martinoia[a,b], Youngsook Lee[a] , and Jian Feng Ma[b]. A rice ABC transporter, OsABCC1, reduces arsenic accumulation in the grain. PNAS (online Sept 2014).

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Intellectual Property and Enterprise

Anti-RPL29 antibody: An autologous antibody to cure malignant tumors

The prognosis for patients with pancreatic cancer is very poor. The 5-year survival rate is less than 10% and mortality has increased recently. Thus there is urgent demand for the development of a new safe and high efficacy therapeutic agent.

A variety of evidence suggests that spontaneous immune responses to autologous tumor-associated antigens affect the cure of malignant tumors, and that some antibodies in sera could influence cancer cells.

Dr. Yasuhiro Miyake (Assistant Professor of Okayama University Hospital) with his colleagues have found the presence of anti-60S ribosomal protein L29 (RPL29) antibody in sera, and showed that the anti-recRPL29-peptides polyclonal antibody inhibited the proliferation of human pancreatic cancer Panc-1 cells via the down-regulation of Wnt/βCatenin signaling pathway in a dose dependent manner. Recent studies showed the positive correlation between the concentration of anti-RPL29 antibody in sera of pancreatic cancer patient and its prognosis. Anti-RPL29 antibody also showed the suppressive effects on the proliferation of other cancer cells such as lung adenocarcinoma, breast cancer, and hepatocellular carcinoma.

RPL29 is one of approximately 80 structural ribosomal proteins, and is highly expressed on the surface of a cancer cell. Silencing RPL29 by RNA interference in cancer cells induces the cell cycle arrest at G0/G1 phase and promotes its apoptosis. RPL29 null mutation in vivo does not show either embryonic lethality or anatomical defects in an

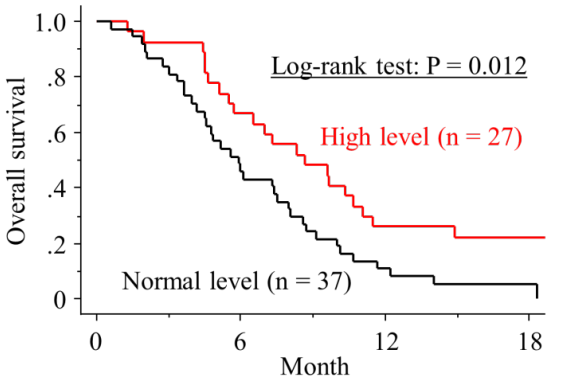


Figure 1. Positive correlation with the concentration of anti-RPL29 antibody in sera and the length of survival time of metastatic pancreatic cancer patients

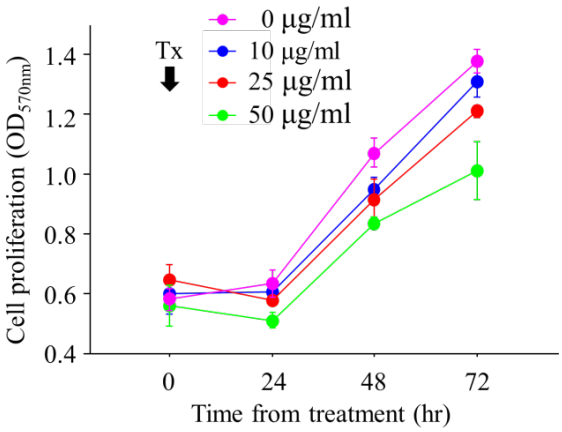
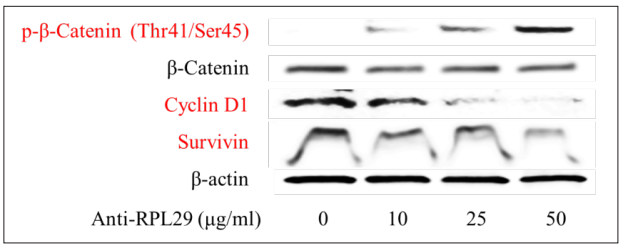


Figure 2. Suppressive effects of anti-RPL29 antibody on the cell proliferation of pancreatic cancer PANC-1 cells via the down-regulation of Wnt/β-catenin signaling pathway in a dose dependent manner

animal model (KO mouse).

Based on the results of these studies, anti-RPL29 antibody could be a first-in-class molecular-targeted drug for the treatment of malignant tumors. In addition, the concentration of the anti-RPL29 antibody in sera can be a new diagnostic biomarker for the treatment of malignant tumors. Further investigations are in process.



[Enquires]
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Topics : Letters from alumni

Igor Mijailovic

Mitsubishi Corporation, Belgrade Liaison Office
(Formerly at the Faculty of Philology, Belgrade University)

I first went to Okayama University 2006 for a one-year Nikkensei Program under the supervision of Professor Ryoichi Tsusumi. The learnt a lot from my experience of studying at Okayama University and I came back in 2008 for an 18 months Research Program under supervision of Professor Suzuki .

Visit to Abashiri, Hokkaido

Now, four years have passed since leaving Okayama and it is getting more and more difficult to say what part of Okayama I owe a greater feeling of thankfulness to: the university lecturers, my foreign student friends or the locals of the city.

Graduation day at Okayama University

The main goal of the Nikkensei Program was enhancement of Japanese language skills and I was put into classes with highly skilled foreign students. I had some previous knowledge of Japanese language but it was very tough at the beginning to catch up with others. But thanks to Tsutsumi sensei's patience, his great leadership and cooperation with his colleagues, I eventually became fluent and got the JLPT N1 certificate.

My practical knowledge of the Japanese language has already proved its value as an important tool in contributing to Japanese business through my work at Mitsubishi Corporation. In other words, my company duly recognizes Okayama University's important role in my education.

However, my stay in Okayama was not just school and study. I also enjoyed many other activities arranged by the University, such as visits to remote sightseeing spots, open sky lessons at Korakuen, and a multitude of happenings with Japanese students.

Okinawa and the southernmost point of Japan.

The tranquil, non-metropolitan atmosphere of the City of Okayama provided us with the joyous and pure flavour of genuine Japan, which has vanished from the big cities. It is hard to find a better place in the world to make local friends. Their warm hospitality and gentle feelings of respect often offset any lack of communication tools.

It is not exaggeration to say that Okayama literally changed the direction of my life. I will utilize the personal and educational base that was able to establish at Okayama University in further contributing to the relationship between Japan and Serbia.

Topics : Okayama Travelogue

Okayama Castle

Okayama Castle was completed in 1597 after eight years of construction under the supervision of Hideie Ukita-a daimyo of the Sengoku period in Japan. In an incredible undertaking for its time, Hideie Ukita initiated a huge effort to reroute the nearby Asahigawa River to flow along the eastern side of the castle to protect the castle from enemies attacking from the rear of the castle.

Visitors will notice the black exterior of the castle. This is the result of black lacquer boards used on the walls of the tower of the castle that are examples of the architectural features of this time. In later years this black exterior led to the castle being known as the Crow (Ujo).

In addition to being a fortress, Hideie Ukita also used the Castle for meeting local merchants and craftsmen to plan the development of the castle town of Okayama.

Later, towards the end of the 17th century, the Ikeda Family took control of the castle and built the huge Okayama Korakuen Garden across the Asahigawa River to the north.

Now, in the 21st century, Okayama Castle is still a majestic presence in the modern city of Okayama.

Further information

Website: http://okayama-kanko.net/ujo/index.html

View of Okayama Castle from the across the Asahi River.

The Castle Tower with its unique black lacquered boards.

The Tsukimi-yagura Tower is one of the buildings has existed in its original state since the completion of the Castle.

Topics : Club Activities

Okayama University Shogi Club

"The Okayama University Shogi Club has a history of about 30 years, "says Naoki Ito , a third year economics student and captain of the club. "We have approximately 50 members from 1st to 4th undergraduates."


Players in a competition game

According to Ito good shogi players are calm, with a wide field of view of the game, and above all they "do not want to lose".

The Okayama University Shogi Club has five female members. Also, the majority of the members are students from science and engineering who starting laying the game during their childhood days. The club is open to all students at Okayama University including foreign students, but at the moment we do not have any overseas members.


Members making 'yaki soba' at a festival.

The members of club gather to practice from 8 to 10 every evening except Sundays. The sessions consists of games between members as well as studying the strategies of professional shogi players.

The 'Chubu-Shikoku Region Students Shogi Tournament' is the main local completion held in the spring and autumn each year. "Winning at the Shikoku tournament guarantees a place to compete at the national student's tournament," says Ito. "Recently we have lost twice consecutively, but previously we won three out of four competitions. We take part in the national competition as one of the strongest student teams in Japan."

The Okayama University Shogi Club is one of the largest shogi club in the Chubu-Shikoku Region of Japan. "We welcome newcomers to join the club and take part in Japanese chess!"

Further information

Website: http://okadaishogi.web.fc2.com/

