

**2017 JAPANESE GOVERNMENT (Monbukagakusho:MEXT)  
Scholarship (University Recommendation)**

**Application Guidelines**

The Global Frontier in Life Science programs are held entirely in English, including the entrance examinations, lectures, experiments, and discussions. 16 laboratories listed in pp. 9 - 14 will be available to accept graduate students. For details of the respective laboratories, please see our website (<http://www.lif.kyoto-u.ac.jp/e/>). Applicants can apply for only one laboratory. Thus, **applicants must contact the lab head and fully discuss potential research activities and availability before filing the application.**

**Offered programs: Master's Program (2 years)/ PhD Program (3 years)**

**Time for enrollment: October 2017**

**Number of applicants to be selected: Up to 8**

The number is for MEXT Scholarship (University Recommendation). Those who have failed in this competitive scholarship screening are still encouraged to apply for the entrance examination for the degree program that will be held separately.

**Period of eligibility check: September 1 (Thu) – October 20 (Thu), 2016**

Every applicant is required to confirm their eligibility for the MEXT Scholarship before submitting the application documents.

**Application Fee: None**

**Application period: October 21 (Fri) – November 4 (Fri), 2016 (17:00 JST)**

**Selection method: Documentation screening and internet interview**

**Interview period: November 14 (Mon) – December 8 (Thu), 2016**

In principle, all applicant will be interviewed.

**Announcement of successful applicants: December 26 (Mon), 2016**

**Note:** For successful applicants in the GSB who are selected to be recommended to the MEXT, the official approval by the MEXT will be announced at a later date.

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## **Prerequisite for the application**

### **Eligibility check**

Please note that every applicant is required to confirm his/her eligibility to apply for the MEXT Scholarship with the GSB Student Affairs Section before submitting the application documents during the designated period indicated below. Applications without a prior eligibility check will not be accepted.

### **Application method for eligibility check**

Please download the designated form for eligibility check. Fill in all necessary information and submit it with your CV that includes your academic record, clearly describing the length of your schooling since elementary school, to [150kyomu@adm.lif.kyoto-u.ac.jp](mailto:150kyomu@adm.lif.kyoto-u.ac.jp) (the GSB Student Affairs Section)

**Period for eligibility check: September 1 (Thu) – October 20 (Thu)**

## **1. Qualifications and Conditions (Eligibility Requirements):**

### **(1) Target Persons**

Excellent students who are residing outside of Japan at the time of application, and who hold a degree from an undergraduate college or university, and who will be able to matriculate in Japan in October, 2017.

### **(2) Nationality**

Applicants must be nationals of a country that has diplomatic relations with the Japanese government. An applicant who has Japanese nationality at the time of application is not eligible. However, persons with dual nationality who hold Japanese nationality and whose place of residence at the time of application is outside of Japan are eligible to apply as long as they choose the nationality of the foreign country and give up their Japanese nationality by their arrival in Japan. Applicant screening will be conducted at the Japanese diplomatic mission in the country of applicant's nationality.

### **(3) Age**

Applicants generally must have been born on or after April 2, 1982.

### **(4) Academic Background**

Applicants must have academic ability equal or superior to that of a Japanese university graduate. A person will be deemed to have academic ability equal or superior to that of a university graduate, if he/she

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[1] has completed or will complete at least a 16-year school education in a foreign country; or  
[2] is or will be aged 22 or older and has taken an individual entrance qualification examination and has been judged by a Japanese graduate school as being equal or superior in academic ability to a university graduate.

For applicants who would like to apply for the PhD program, only those who currently fall into one of the following categories, or are anticipated to do so as of September 30, 2017 will be eligible to apply:

[3] Those who have a master's degree, a master's-level professional degree, or a juris doctor (JD) degree

[4] Those who have completed a program equivalent to the GSB's master's program or professional degree program in a foreign country

[5] Those who, by taking relevant courses via a correspondence program offered by a school in a foreign country, have completed a program equivalent to the university's master's program or professional degree program

**Note:** Eligible applicants include those who otherwise satisfy or will satisfy qualification requirements for admission to a Japanese graduate school. As a general rule, a person who has completed a doctoral course may not apply unless he/she seeks to obtain a degree.

**(5) Field of Study**

Applicants should apply for the field of study they majored in at university, or a related field. Moreover, the field of study must include subjects which applicants will be able to pursue-and research at the GSB.

**(6) Health**

Applicants must be physically and mentally healthy enough to complete graduate studies at the GSB in Japan.

**(7) Arrival in Japan**

In principle, applicants must be able to arrive in Japan by early October, 2017.

**(8) VISA Requirement**

In principle, selected applicants must acquire "College Student" (ryugaku, 留学) visas before entering Japan. The visas should be issued at the Japanese legation, located in the country of the applicants' nationality.

Applicants who change their resident status to any status other than "College Student" after their arrival in Japan will immediately lose their status as Japanese government scholarship students.

**(9) Others**

Any applicant who meets any or all of the following conditions is ineligible. If such a condition is identified after the start of the scholarship period, the applicant will be required to withdraw from the scholarship:

[1] Those who are military personnel or military civilian employees at the time of their arrival in

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Japan;

[2] Those who cannot arrive in Japan during the period designated by MEXT;

[3] An applicant who is a previous recipient of a Japanese government scholarship and who does not have educational research experience exceeding three years from the first day of the month following the final payment of the previous scholarship to the beginning of the payment of this scholarship, as of October 1, 2017. This does not apply to past recipients of Japanese Studies Students and Japan-Korea Joint Government Scholarship Program For the Students in Science and Engineering Studies who have graduated or are going to graduate from universities in their home countries and the past student participants in the Young Leaders Program;

[4] Those who are currently enrolled at a Japanese university with College Student (ryugaku) residence status; those enrolled, or scheduled to be enrolled, at a Japanese university as a self-financed international student between the date when the scholarship application is filed in the Graduate School of Biostudies (GSB), Kyoto University and the start date of the scholarship. This does not apply to current self-financed international students at Japanese universities who will complete their courses of study and temporarily return to their home countries at the time of scholarship application;

[5] Dual application for the MEXT Scholarship (University Recommendation) with other Japanese Universities or award of scholarship(s) from institutions other than Japanese Government (MEXT) or Japan Student Service Organization (JASSO), including current recipients of MEXT or JASSO financial aid for foreign students who will be continuously supported to study in a Japanese institution after October, 2017.) that overlap with the Japanese Government Scholarship (Prospective beneficiaries are included);

[6] Applicants who are expected to graduate at the time of application and cannot satisfy the qualifications and the conditions related to academic background by the deadline given;

[7] Holders of dual nationality at the time of application who cannot verify that they will give up Japanese nationality by the time of their arrival in Japan; or

[8] Applicants who wish, from the time of application, to conduct fieldwork or participate in an internship outside of Japan, since this scholarship program is intended for overseas students who wish to enroll in the GSB in Japan and conduct graduate research in the GSB in Japan.

## **2. Term of Scholarship:**

For Master's students: From October 2017 to September 2019 (2 years)

For PhD students: From October 2017 to September 2020 (3 years)

**Note:** Extension of the term of scholarship will NOT be available for both categories of degree program students above according to the MEXT guidelines.

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### **3. Scholarship Benefits:**

#### **(1) Allowance:**

Amount of monthly stipend for Master's students who are studying in Kyoto city: 147,000 JPY

Amount of monthly stipend for PhD students who are studying in Kyoto city: 148,000 JPY

The monetary amount each year may be subject to change due to budgetary reasons. The scholarship is cancelled in principle if the recipient is absent from the university for an extended period. The scholarship will be also cancelled in principle in the following situations. If the recipient has been receiving the scholarship despite his/her falling under any of the following situations, the recipient will be ordered to return the amount of scholarship that he/she received during the period wherein he/she was involved with any of the following situations.

- [1] The recipient is determined to have made a false statement on his/her application;
- [2] The recipient violates any articles of his/her pledge to the MEXT;
- [3] The recipient violates any Japanese Laws;
- [4] The recipient is expelled from Kyoto University or receives other punishment, or is removed from enrollment; (The scholarship payment may be stopped during the period up until punishment is decided by the university, etc.)
- [5] It has been determined that it will be impossible for the recipient to complete the graduate program within the standard time period because of poor academic grades or suspension from the university;
- [6] The recipient's residence status has changed to one other than College Student as defined in the Appended Table I-4 of the Immigration Act;
- [7] The recipient has received a scholarship from another institution (excluding those specified for research expenditures);
- [8] ONLY for Master's applicants: If he/she proceeds to a more advanced level of education without receiving approval for an extension of the period of the scholarship.
- [9] The recipient withdraws from Kyoto University or transfers to another institution.

#### **(2) Travel Costs:**

- [1] Transportation to Japan:

The recipient will be provided, according to his/her itinerary and route as designated by MEXT, with an economy-class airplane ticket from the international airport nearest to his/her home country residence\* to the Kansai International Airport in Osaka prefecture or any other international airport that Kyoto university usually uses. Expenses such as inland transportation from his/her home address to the international airport, airport tax, airport usage fees, special taxes on travel, or inland transportation within Japan will NOT be covered. (\*The address in the

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country of the recipient's nationality stated in the application form is in principle regarded as the recipient's "home country residence".

**Note:** Those who cannot arrive in Japan on the day that is described in "1. Qualification and Condition (7) Arrival in Japan" shall not be paid the travel expenses.

**[2] Transportation from Japan:**

In principle, the recipient who returns to his/her home country within the fixed period after the expiration of his/her scholarship will be provided, upon application, with an economy-class airplane ticket for the travel from the Kansai International Airport to the international airport nearest to his/her home address.

**Note 1:** Any aviation and accident insurance to and from Japan shall be paid for by the recipient.

**Note 2:** If a recipient continues to stay in Japan after the scholarship period has ended, he/she will not be paid travel expenses to return to the home country for a temporary return.

**(3) Tuition and Other Fees:**

Fees for matriculation and tuition at Kyoto University will be paid by Kyoto University.

**4. Application procedures and Documents to be submitted:**

There will be active correspondence from your prospective advisor for inquiries such as eligibility by emails and internet interviews. Please answer as courteously as possible.

Listed below are documents to be submitted by the applicants to the GSB. Please read through the notes below first and follow your prospective advisor's direction before you submit all the documents by the deadline.

**Notes:**

(1) All documents, except for specified official documents, must be submitted in size A4 paper (same size as the application form, double-sided printing), either in Japanese or English, preferably in typed or printed format. (If a document is in a language other than Japanese or English, please attach a Japanese or English translation.)

(2) All abstracts of degree theses (if applicable) must be outlined briefly.

(3) Please contact your prospective advisor if you have questions about documents to be submitted.

(4) No submitted documents will be returned.

(5) All documents must be submitted together in a single packet and sent via a recorded international delivery service (e.g. FedEx, DHL, EMS, and etc.) within the designated period.

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(6) Incompleteness of the documents or delivery later than November 4 (Fri) JST 17:00 will not be accepted.

**Place to Submit Your Application Documents**

Student Affairs Section, Graduate School of Biostudies, Kyoto University

Postal Address: Yoshida-Konoe-cho, Sakyo-ku, Kyoto, 606-8501, Japan

Email: [150kyomu@adm.lif.kyoto-u.ac.jp](mailto:150kyomu@adm.lif.kyoto-u.ac.jp)

Phone: +81-(0)75-753-9424, Fax: +81-(0)75-753-7992

**Application period:** October 21 (Fri) – November 4 (Fri), 2016 (17:00 JST)

**List of Documents to be submitted**

Prescribed forms are available to download from the URL below:

[http://www.lif.kyoto-u.ac.jp/Global frontier in life science/guidelines/index.html](http://www.lif.kyoto-u.ac.jp/Global%20frontier%20in%20life%20science/guidelines/index.html)

[1] Application for Japanese Government (Monbukagakusho: MEXT) Scholarship for 2017

**[original document ,printed,double-sided]**

[2] Field of Study and Study Program **[original document printed, double-sided]**

[3] Letter of recommendation 1:

Written by the dean of your current educational institution or at least by the head of the department, with his/her hand-written signature. The letter must include the dean/head's contact information and be written on the letterhead of the institution to which the dean/head belongs.

[4] Letter of recommendation 2:

Written by the supervisor of the applicant at the university to which you belong or from which you graduated, with his/her hand-written signature. The letter must include the supervisor's contact information and be written on the letterhead of the institution to which the supervisor belongs.

[5] Letter of recommendation 3:

If you are employed at a public agency or company at the time of application, submit a letter of recommendation from your immediate supervisor, with his/her hand-written signature. The letter must include your supervisor's contact information and be written on the letterhead of the agency/company to which he/she belongs.

[6] Letter of provisional acceptance:

Written by your prospective supervisor in the GSB. (Document written in Japanese will be accepted.)

[7] One 4.5cm×3.5cm identity photo (full-faced, from the waist up, no hat, taken within the past

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six months. Write your name and nationality on the back of the photo and paste it on the application form in the space provided.)

[8] A copy of your academic transcripts from the program you have already completed, including your most advanced degree.

[9] A copy of the diploma/degree certificate you have already obtained (If you are still in a program, an official certificate with expected date of graduation) <Copy>

[10] Any certificate indicative of your academic excellence in the most recent academic institution, such as GPA, streaming, rank order in a class. <Copy>

[11] Abstracts of any theses <Copy>

[12] Any certificate indicating your linguistic capabilities and expertise, such as TOEFL, TOEIC, IELTS, Japanese score in EJU, Japanese Language Aptitude Test. <copy>

[13] Research Achievements (for interview)

[14] ONLY for Master's applicants: A valid score for the GRE General Test and Subject Test: General Test score is strongly recommended, but not strictly required. Any scores of the Subject Test are optional. Acceptable tests include: Biology/Biochemistry/Cell and Molecular Biology/Chemistry/Physics.

[15] An official document indicating your nationality, such as a family register and citizenship certificate, passport, etc. <copy>

**5. For applicants who graduated or are expecting to graduate from a university in Mainland China or Hong Kong or Taiwan**

Please contact the Kyoto University Admissions Assistance Office (AAO) and follow their instructions before or currently with the application.

URL: <https://www.aao.opir.kyoto-u.ac.jp/>

**6. List of the laboratories**

See p.9 - 14. For more details, please see our website:

Lab details: [http://www.lif.kyoto-u.ac.jp/e/?page\\_id=26](http://www.lif.kyoto-u.ac.jp/e/?page_id=26)



**Research Fields and Contents of Research – September 1, 2016**

<b>Division of Integrated Life Science</b>		
<b>Laboratory</b>	<b>Faculty members</b>	<b>Contents of the research</b>
Cell Cycle Regulation	F. Ishikawa T. Miyoshi M. Sadaie	<p>This laboratory focuses on the question how eukaryotic chromatin dynamically responds to various stresses during the cell cycle, differentiation, aging, and cancer development. We specifically dissect cellular responses to telomere dysfunction, low-dose environmental stresses, and genome insertion of retrotransposon. These efforts will shed light on how cancer cells acquire malignant phenotypes in the clonal evolution.</p> <p><b>Email:</b> <a href="mailto:fishikaw@lif.kyoto-u.ac.jp">fishikaw@lif.kyoto-u.ac.jp</a></p>
Plant Molecular Biology	T. Kohchi R. Nishihama S. Yamaoka	<ol style="list-style-type: none"> <li>1. Photomorphogenesis and environmental regulation of plant development</li> <li>2. Comparative genomics and molecular genetics with the liverwort, <i>Marchantia polymorpha</i></li> <li>3. Genomic and post-genomic analyses of <i>Marchantia polymorpha</i></li> </ol> <p><b>Email:</b> <a href="mailto:tkohchi@lif.kyoto-u.ac.jp">tkohchi@lif.kyoto-u.ac.jp</a></p>
Applied Molecular Microbiology	H. Fukuzawa T. Yamano M. Kajikawa	<p>We are focusing on the molecular bases of biological functions of photosynthetic microorganisms contributing to production of food, carbon-neutral renewable bio-energy and industrial materials, and also to environmental remediation by photosynthesis. Especially we employ a green alga, <i>Chlamydomonas reinhardtii</i>, as a model eukaryotic microorganism using its genome information, mutants, and molecular or biochemical techniques. The current projects are (1) Molecular characterization and modification of the carbon-</p>

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		<p>concentrating mechanism supporting photosynthetic carbon fixation, energy production, and cell proliferation, (2) Elucidation of regulatory network systems controlling photosynthesis by sensing environmental factors including changes of levels in CO<sub>2</sub> concentration and light, (3) Elucidation and engineering of metabolic pathways for production of neutral lipids, hydrocarbons, and carbohydrates under specific culture conditions, (4) Molecular control and signaling of sexual reproduction by nutrient starvation.</p> <p><b>Email:</b> <a href="mailto:fukuzawa@lif.kyoto-u.ac.jp">fukuzawa@lif.kyoto-u.ac.jp</a></p>
Plant Developmental Biology	T. Araki M. Endo	<p>We are interested in molecular mechanisms underlying plant responses to the environment. Plants have evolved plastic developmental programs, with both a genetic and epigenetic basis, to adapt their sessile mode of life to a changing environment. Using an angiosperm, <i>Arabidopsis thaliana</i> and a liverwort, <i>Marchantia polymorpha</i> as model systems, we are investigating: (1) regulation of growth phase transition (especially, flowering) and aging in response to environmental and endogenous signals, (2) long-distance systemic signaling in control of development, (3) tissue-specific roles of circadian clock for optimal environmental responses, (4) sexual reproduction processes, and (5) origin and evolution of regulatory systems for plastic development.</p> <p><b>Email:</b> <a href="mailto:taraqui@lif.kyoto-u.ac.jp">taraqui@lif.kyoto-u.ac.jp</a></p>

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Plasma Membrane and Nuclear Signaling	S. Yoshimura M. Kumeta	<p>Our laboratory studies dynamic properties of proteins and large protein complexes in cellular environments by using a variety of techniques in biochemistry, molecular biology and cellular biology, in combination with nano-technology and computational simulation. Specific research topics include: (1) structural dynamics of flexible and repetitive proteins in intracellular environments, (2) in vivo imaging of assembly and disassembly of a large protein complex, (3) single-molecule imaging of higher-order architectures of nucleoprotein complexes.</p> <p><b>Email:</b> <a href="mailto:yoshimura@lif.kyoto-u.ac.jp">yoshimura@lif.kyoto-u.ac.jp</a></p>
Developmental Neurobiology	M. Kengaku	<p>We study the dynamics and mechanisms of the formation of neural networks in the brain. We also aim to develop live-imaging techniques for observation of molecular signals controlling cell motility in the developing brain.</p> <p><b>Email:</b> <a href="mailto:kengaku@icems.kyoto-u.ac.jp">kengaku@icems.kyoto-u.ac.jp</a></p>
Molecular and Cellular Immunology	T. Fujita H. Kato	<p>Virus infections such as influenza A epidemic and Chronic Hepatitis B virus infection are still important diseases, and outbreaks of newly emerging viruses are serious problems for modern society. Higher animals, including humans, are genetically equipped with mechanisms, collectively known as innate immunity, to counteract viral infections.</p> <p>The purpose of our project is to clarify the molecular mechanism underlying antiviral innate immunity regulated by RIG-I, a cytoplasmic sensor for viral RNA, and to develop new diagnostic and therapeutic tools for viral infections.</p> <p><b>Email:</b> <a href="mailto:tfujita@virus.kyoto-u.ac.jp">tfujita@virus.kyoto-u.ac.jp</a></p>

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Developmental Dynamics	R. Kageyama T. Otsuka T. Kobayashi	<p>We analyze the molecular mechanism of embryonic development by using imaging, optogenetics and transgenic mouse technologies. We evaluate mathematical modeling to understand the principles of developmental dynamics.</p> <p><b>Email:</b> <a href="mailto:rkageyam@virus.kyoto-u.ac.jp">rkageyam@virus.kyoto-u.ac.jp</a></p>
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<b>Division of Systemic Life Science</b>		
<b>Laboratory</b>	<b>Faculty members</b>	<b>Contents of the research</b>
Single-Molecule Cell Biology	N. Watanabe S. Yamashiro H. Mizuno	<p>By direct viewing using Single-Molecule Speckle (SiMS) microscopy, our laboratory elucidates cell structure remodeling dynamics in living cells. We also extend the application of our multi-target super-resolution microscopy IRIS to various pathophysiological conditions. We are trying to bridge the gap between molecular activities and cell/body functions such as cellular mechanosense, cell migration, cancer proliferation/invasion and drug responses.</p> <p><b>E-mail:</b> <a href="mailto:watanabe.naoki.4v@kyoto-u.ac.jp">watanabe.naoki.4v@kyoto-u.ac.jp</a></p>
Molecular Cell Biology and Development	F. Matsuzaki	<p>We are interested in the mechanisms by which cell polarity and asymmetric division generate cellular diversity, as a fundamental cellular process in multicellular organisms.</p> <p>We are also exploring how cellular processes organize complex tissues in multi-cellular organisms, especially focusing on genetic and epigenetic programs, which neural stem cells undertake for brain development and maturation, using mouse, Drosophila as well as organoids produced from ES cells as model systems.</p> <p><b>Email:</b> <a href="mailto:fumio@cdb.riken.jp">fumio@cdb.riken.jp</a></p>

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	T. Kitajima	<p>We are interested in how chromosomes behave in time and space to archive correct chromosome segregation during meiosis in mammalian oocytes. Taking advantage of our live imaging technology, we conduct comprehensive quantitative analysis of the chromosome dynamics.</p> <p><b>Email:</b> <a href="mailto:tkitajima@cdb.riken.jp">tkitajima@cdb.riken.jp</a></p>
Genetics	T. Igaki S. Ohsawa M. Enomoto	<p>Our research focuses on the molecular basis of cell-cell communication that governs tissue growth, homeostasis, and cancer. We take advantage of the powerful genetics of <i>Drosophila</i>.</p> <p>Research subjects:</p> <ol style="list-style-type: none"> <li>1. Mechanism of cell competition</li> <li>2. Genetic basis of tissue growth regulation</li> <li>3. Molecular basis of tumor progression and metastasis</li> </ol> <p><b>Email:</b> <a href="mailto:igaki@lif.kyoto-u.ac.jp">igaki@lif.kyoto-u.ac.jp</a></p>
Functional Biology	K. Kakizuka H. Imamura N. Sasaoka	<p>Using animal models of human diseases, such as neurodegenerations, cancers, and obesity-related diseases, and using metabolic imaging techniques, we aim to elucidate molecular bases of such diseases and develop new strategies to cure or prevent them.</p> <p><b>Email:</b> <a href="mailto:kakizuka@lif.kyoto-u.ac.jp">kakizuka@lif.kyoto-u.ac.jp</a></p>
Chromosome Function and Inheritance	P. Carlton	<p>We study how genetic information is correctly maintained and passed on through cell divisions. Combining molecular genetic approaches with advanced microscopy and quantitative imaging, we focus on mechanisms of chromosome pairing and recombination in meiosis in the nematode <i>C. elegans</i>, as well as epigenetic modification of chromatin during the mammalian DNA damage response.</p> <p><b>Email:</b> <a href="mailto:pcarlton@icems.kyoto-u.ac.jp">pcarlton@icems.kyoto-u.ac.jp</a></p>

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Viral Oncology	K. Tomonaga M. Hijikata	<p>The main purpose of this laboratory is to clarify the molecular mechanisms of pathogenesis caused by the infection of RNA viruses. Molecular and cellular biological analyses of the viral life cycle and effects of viral infection on cellular events are under investigation.</p> <p><b>Email:</b> <a href="mailto:tomonaga@virus.kyoto-u.ac.jp">tomonaga@virus.kyoto-u.ac.jp</a></p>
Cancer Cell Biology	H. Harada	<p>Several lines of evidence have suggested that hypoxic, acidic and nutrients-depleted microenvironments exist in solid tumors and induce malignant phenotypes and chemo/radioresistance of cancer cells. We aim at elucidating molecular mechanisms responsible for cellular adaptive responses to the tumor-specific microenvironments and malignant progression of cancer cells and aiming at developing novel strategies targeting them.</p> <p><b>E-mail:</b> <a href="mailto:harada.hiroshi.5e@kyoto-u.ac.jp">harada.hiroshi.5e@kyoto-u.ac.jp</a></p>