平成30年度
2018

大学院医学系研究科生命医科学専攻
（修士課程）
Course of Biomedical Sciences in Graduate School of Medicine
（Master’s Program）

第2次 学生募集要項
Secondary Admission Guidelines

周囲は群馬県の象徴である名勝赤城、榛名、妙義の
上毛三山を浮爬りさせて大学を囲み、群馬大学の象
徴となっています。

The above design of "大學 (kanji for university, called
“daigaku”)" surrounded by the famous picturesque view
of three carved mountains which comprise Mt. Akagi, Mt.
Haruna, and Mt. Myogi and are called JOMO SANZAN
symbolizing Gunma Prefecture is the emblem of Gunma
University.
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Admission Guidelines
Educational Policy of Gunma University

Admission Policy
~We seek the following applicants~

We seek applicants who have academic skills and capabilities required by the graduate schools or institutes according to their programs or specialties. Applicants should be motivated to contribute to the development of society through research and practice.

Curriculum Policy
~We conduct education as follows~

In order to foster researchers who can be internationally active and have a creative capability, and highly specialized professionals who have a practical skill, we organize and implement systematic curricula toward realization of the educational goals according to the programs or majors of the graduate schools or institutes, aiming to cultivate students’ fundamental education in specialties and encourage students to master sophisticated technical knowledge and skills.

Diploma Policy
~We develop human resources as follows~

We confer a degree on persons who can conduct research activity in their specialties inventively and independently, based on broad and rich knowledge, and who have acquired the skills to fulfill a profession requiring a high degree of expertise and internationality, as well as a sense of ethics as an researcher, engineer or highly specialized professional, and who satisfy the completion requirements set according to the programs or majors of the graduate schools or institutes.
Educational Policy for Course of Biomedical Sciences in Graduate School of Medicine, Gunma University (Master’s Program)

Admission Policy
~The Biomedical Sciences course is looking for the following candidates.~

<Aims in Human Resources Development>
Our program aims to cultivate scientists who will pursue medical science, medical ethics, and medical skills. We hope our graduates will integrate these pursuits and contribute to the progress of medical research and education, and become leaders in health care and medical science.

<Attributes of Desired Candidate>
We will accept students who wish to gain knowledge and skills in biomedical sciences through our program, and become highly-skilled professionals or researchers. Specifically, we will accept those who:
1. strive to gain the ability to perform research independently based on high ethical values and profound academic knowledge.
2. strive to contribute to the society in medical science, health care and welfare filed as highly-skilled professionals by making use of the knowledge and skills they acquired.
3. strive to further develop the knowledge and skills they acquire, and continue to the PhD program to become researchers and/or educators in Biomedical Sciences field.

<Screening Process>
In order to enroll candidates consistent with our admission policy, we will comprehensively evaluate the results of the entrance examination (written test and interview) and undergraduate academic transcripts. We will take the variety in academic backgrounds of applicants into consideration, and allow applicants to select questions from either the biomedical field or the medical physics field for the written examination. We offer October admission in addition to the traditional April admission to increase educational opportunity.

Curriculum Policy
~The Biomedical Sciences course is doing the following education and research.~

The Biomedical Sciences course which is interdisciplinary region between life sciences and medical sciences is doing the following education and research.
1. Promoting the elucidation of biological processes from a medical perspective, and to do the systematic education in area of Biomedical Sciences who will deliver new forms of medical care not only diagnoses and treatments, but also the promotion of good health and improved quality of life.
2. After proceeding fundamental knowledge of life sciences/medical sciences/ medical treatments, basic techniques and morals that we need, applicable and practical knowledge that is appropriate to the research project or the student’s career options after earning a Master’s Degree.
3. The knowledge needed to propose, implement and apply a research project and techniques for presenting research result will be acquired. Also, research will be carried in a specialized field and the research outcome will be compiled as a thesis for growing the leader.

Diploma Policy
~The Biomedical Sciences course grow the following candidates.~

We grow the person who are based on the deep moral and knowledge and have a skill of self-research though our education. We will be prized the diploma the following person who fulfill the graduated terms that we made.
1. People who proceeded the special knowledge and advanced skill that could be active by life sciences, medical sciences, medical treatments and medical welfare.
2. People who can participate the research taking the leadership in Biomedical Sciences course.
## Secondary Admission Guidelines

### 1 Number of Students to be Admitted

<table>
<thead>
<tr>
<th>Basic Medicine</th>
<th>Clinical Medicine</th>
<th>Cooperative and Joint Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>(Internal Medicine) Cardiovascular Medicine Endocrinology and Metabolism</td>
<td>(University Hospital) Clinical Trials and Regulatory Science Medical Informatics</td>
</tr>
<tr>
<td>Anatomy and Cell Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular and Cellular Neurobiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td>(General Surgical Science) Gastroenterological Surgery</td>
<td>(Institute for Molecular and Cellular Regulation) Molecular Traffic Medical Neuroscience Secretion Biology Molecular Membrane Biology Molecular Endocrinology and Metabolism Developmental Biology and Metabolism Metabolic Signaling Laboratory of Epigenetics and Metabolism Molecular Genetics Genome Sciences Laboratory of Integrated Signaling Systems</td>
</tr>
<tr>
<td>Neurology and Neurological Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genomics and Behavioral Neurosciences</td>
<td>Radiation Oncology</td>
<td></td>
</tr>
<tr>
<td>Molecular Pharmacology and Oncology</td>
<td>Diagnostic Radiology and Nuclear Medicine</td>
<td></td>
</tr>
<tr>
<td>Bacteriology</td>
<td>Psychiatry and Neuroscience</td>
<td></td>
</tr>
<tr>
<td>Parasitology</td>
<td>General Practice Medicine</td>
<td></td>
</tr>
<tr>
<td>Public Health</td>
<td>Rehabilitation Medicine</td>
<td></td>
</tr>
<tr>
<td>Legal Medicine</td>
<td>Clinical Laboratory Medicine</td>
<td></td>
</tr>
<tr>
<td>Medical Philosophy and Ethics</td>
<td>Human Pathology</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Pathology</td>
<td>(Heavy Ion Clinical Medicine) Medical Physics and Biology for Ion Therapy Heavy Ion Clinical Medicine</td>
<td></td>
</tr>
<tr>
<td>Pediatrics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obstetrics and Gynecology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urology</td>
<td></td>
<td>(Takasaki Advanced Radiation Research Institute,National Institutes for Quantum and Radiological Science and Technology) Quantum Biology</td>
</tr>
<tr>
<td>Otolaryngology-Head and Neck Surgery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Pharmacology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality and Safety in Healthcare (tentative)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Inquiries about admission should be made directly to supervisors in desired Field of Study (from page 45 onwards) prior to the actual application process. Major Department can be changed at the end of the 1st semester of the 1st year.
2 Qualifications for Application

A person who can apply shall be a person who falls under any of the following provisions.

1. A person who has graduated or is expected to graduate from a university by March 2018.
2. A person who has been conferred or is expected to be conferred by March 2018 a bachelor’s degree under the provisions of Article No. 104-4 of the School Education Act (Act No. 26 of 1947).
3. A person who has completed or is expected to complete a 16-year course of school education in a foreign country by March 2018.
4. A person who has completed or is expected to complete a 16-year course of foreign school education by taking class subjects in Japan through correspondence courses run by the foreign country concerned by March 2018.
5. A person who has completed or is expected to complete a foreign country’s university course at an educational institution in Japan (limited to the person who has completed a 16-year course of the said foreign school education) which is designated as having a foreign university’s curriculum in the said foreign country’s education system and separately designated by the Minister of Education, Culture, Sports, Science and Technology by March 2018.
6. A person who has completed three or more years of study at a foreign university, or foreign educational establishment (including a person who, while residing in Japan, has completed the program of education provided by a foreign university or foreign educational establishment through correspondence or distance education courses) and who received or is expected to be conferred by March 2018 a degree certificate that is recognized by the Japanese Ministry of Education, Culture, Sports, Science and Technology.
7. A person who has completed or is expected to complete a specialized course separately designated by the Minister of Education, Culture, Sports, Science and Technology at a vocational school on or after the date specified by the Minister of Education, Culture, Sports, Science and Technology (limited to the vocational school with the school term of four years or more meeting the other standards specified by the Minister of Education, Culture, Sports, Science and Technology).
8. A person designated by the Minister of Education, Culture, Sports, Science and Technology (Notification No.5 of the Ministry of Education, 1953).
9. A person who entered a graduate school other than our Graduate School based on the provisions of Article 102-2 of the School Education Act (Act No. 26 of 1947) and who has been recognized by our Graduate School as having academic abilities appropriate for receiving graduate school education.
10. A person who has been recognized by our Graduate School as having academic abilities equivalent or superior to a person who has graduated a university based on the results of individual examination of the applicant’s qualifications, and who will be 22 years of age by March 31, 2018.
11. A person who has been enrolled at a university for 3 years or more by March 2018 (including an equivalent person specified by the Minister of Education, Culture, Sports and Technology), and who has been recognized by Gunma University as having acquired the required units with excellent results.

3 Screening etc. for “Qualifications for Application” (Only if applicable)

1. A person who intends to apply under the provisions of Qualifications for Application (9) or (10) must undergo the screening of requirements for admission of our Graduate School before applying under the following conditions, and the only person who is proved that he/she has Qualifications for Application can apply.

   The result of the qualification screening will be notified to each applicant by December 19 (Tue.), 2017.

   a. Application period
      December 4 (Mon.), 2017
   b. Application documents
      i. In the case of the screening concerning Qualifications for Application (9):
         1. Application for the screening of admission requirements (The form attached to our admission guidelines must be used. [Form-9])
II Academic transcript (faculty results and the document showing the curriculum of the faculty (e.g. syllabus))

III Certificate of student status (issued by the president of the university (graduate school) you are in and with the date of your entrance). If you completed or quit the graduate school, submit the document with the date of your entrance (e.g. the transcript from the graduate school).

IV Published academic papers etc. on research achievements, if any.

2 In the case of the screening concerning Qualifications for Application (10):

I Application for the screening of admission requirements (The form attached to our admission guidelines must be used. [Form-9])

II Certificate of Research Activities (The form attached to our admission guidelines must be used. [Form-10])

III Published academic papers etc. on research achievements or other remarkable achievements, if any.

IV Graduation Certificate or Completion Certificate issued by the final educational institution (including a junior college, an advanced vocational school or a vocational school, etc.) from which the applicant graduated.

V Academic transcript issued by the final educational institution (including a junior college, an advanced vocational school or a vocational school, etc.) from which the applicant graduated.

(c) Application documents should be sent to:
Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University, 3-39-22 Showa-machi, Maebashi City, Gunma 371-8511, JAPAN
TEL. +81-27-220-7797

2 A person who intends to apply under the provisions of Qualifications for Application (11) must inquire at the office described in (1)-(c) before applying.

4 Acceptance of Application

(1) Acceptance Period of Application
December 20 (Wed.) to December 27 (Wed.), 2017 (without fail)

(2) Submission Procedures of Application documents
Application documents must be submitted by delivering them in person or by mail within the application period.

① Application documents submitted in person will be accepted at Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University described in (3) from 9:00 a.m. to 4:00 p.m.

② When mailing the documents, be sure to use registered mail and write "Application form for Graduate School of Medicine enclosed" in red on the front of the envelope and send it to Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University described in (3).

Notes:
1. Application documents will not be accepted after the designated application period. The documents should be sent early taking mailing conditions / mailing period into consideration. When special circumstances need to be taken into consideration, please contact "Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University described in (3) by December 20 (Wed.), 2017 at 4:00 p.m.”

2. If the application documents are sent by ordinary mail, Gunma University will not be responsible for it no matter what happens to the documents.

(3) Application documents should be sent to:
Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University, 3-39-22 Showa-machi, Maebashi City, Gunma 371-8511, JAPAN
TEL. +81-27-220-7797
(4) Application Documents, etc. (The form is also available through the website of the Graduate School of Medicine and the Faculty of Medicine, Gunma University. (http://www.med.gunma-u.ac.jp/))

<table>
<thead>
<tr>
<th>Documents</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Application Form and Curriculum Vitae (Form-1)</td>
<td>Fill out the form attached to our admission guidelines or obtained from the homepage. Only the person who has graduated or will graduate from a school in foreign country must fill in his/her curriculum vitae.</td>
</tr>
<tr>
<td>2 Statement of Purpose (Form-2)</td>
<td>A statement written by the applicant describing reasons for applying. (The number of characters is not limited.)</td>
</tr>
<tr>
<td>3 Entrance Examination Fee</td>
<td>¥30,000 (Examination Fee: JPY 30,000)</td>
</tr>
</tbody>
</table>

Please select one from the following four payment methods.

1. Payment at a bank in Japan (the payment cannot be made at post office).
   (1) The examination fee transfer form provided must be used and the payment should be made at a teller’s window of your nearest bank. Bank transfer fees are chargeable on the person who pays the fees [Form 3].
   (2) Confirm that the “Certificate of Transfer Receipt” is sealed by the bank (financial institution) and paste it on the prescribed place in the “Sheet for Certificate of Transfer Receipt” [Form 4].
   (3) The transfer payment receipt should be kept with good care as your own duplicate.

2. Payment at a convenience store (make sure that you have a personal computer or cell phone with you).
   (1) Refer to the page 41 when you pay at a convenience store. Payment commissions are chargeable on the person who pays the fees.
   (2) After payment, receive the “Application Fee Statement”, detach the “Certificate of Payment” (receipt) portion from it, and paste it on the prescribed place in the “Sheet for Certificate of Transfer Receipt” [Form 4].
   (3) Payment period: December 11 (Mon.) to 300 p.m. (Japan time) of December 27 (Wed.), 2017. When you make payment via the web site, you have to pay 30 minutes before the end of payment period.

3. Payment by credit card (make sure that you have a personal computer or cell phone connected to a printer with A4 paper with you).
   (1) Refer to the page 41 when you pay by credit card. Payment commissions are chargeable on the person who pays the fees.
   (2) After payment, print the “Application Fee Statement”, detach the “Certificate of Payment” (receipt) portion from it, and paste it on the prescribed place in the “Sheet for Certificate of Transfer Receipt” [Form 4]
   (3) Payment period: December 11 (Mon.) to 300 p.m. (Japan time) of December 27 (Wed.), 2017.

4. Remittance from abroad
   (1) Please make a remittance on a yen basis from a bank teller’s window to the Following bank account (a bank transfer fee and an overseas remittance fee will be borne by an applicant in person).
   (2) Paste the receipt (the copy of it is also valid) you receive from a bank on the prescribed place in the “Sheet for Certificate of Transfer Receipt” [Form 4]”. In addition, if an excess or a deficiency arises in amount of remittance, please note that it cannot be dealt with.
   (3) When you make a remittance, please contact a person in charge of Gunma University as below. At which time, be sure to specify your name, the name of the nation from which you remit, and your planning to apply for our Master’s Program. ([E-mail: kk-mgakumu5@jimu.gunma-u.ac.jp])
   ○Bank Account
     Bank: The Towa Bank, LTD (Bank Code: 0516)
     Branch: Maebashi Kita Branch (Branch Code: 012)
     Address: 1-5-2 Kokuryo-cho, Maebashi City, Gunma, 371-0033, JAPAN
     TEL: +81-27-231-6789
     Swift Code: TOWAJPJT
     Account number: 3169574 (Savings Account)
     Name of account: Gunma daigaku
     Address of AC holder: 4-2 Aramaki-machi, Maebashi City, Gunma, 371-8510, JAPAN
     TEL: +81-27-220-7062
   (4) Transfer Payment period: December 11 (Mon.) to 300 p.m. (Japan time) of December 27 (Wed.), 2017.
(5) Payment by using ATM (Automated Teller Machine), cell phone or personal computer should not be made.

**Concerning the return of the entrance examination fee (Common notes to both remittances)**

*In principle, the entrance examination fee will not be returned, but will be returned in the following cases according to the designated procedures.*

1. When an application is not made after paying the entrance examination fee.
2. When the entrance examination fee is paid twice, or more than the amount of fixed money accidentally.
3. When application documents are not accepted after submission.

Please send the declaration form in which the following 1~4 are described to admission section in Showa campus of Gunma University.

We will return the entrance examination fee later.

### Declaration of claiming back the Entrance Examination Fee (Master’s Program)

1. The reason why you want to claim back the fee.
2. Name
3. Postal Code, Present Address
4. Phone Number or E-mail Address

### Address for sending the declaration form:
Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University, 3-39-22 Showa-machi, Maebashi City, Gunma 371-8511, JAPAN

*If the applicant is receiving the Japanese Government (MEXT) Scholarship at the time of application, the examination fee payment is not required. Please submit the document certifying the recipient of the scholarship.*

*When performing the procedures of the return of the entrance examination fee, the transfer payment receipt will be needed (When performing the procedures abroad, the original transfer payment receipt you receive from a bank will be needed). Any processing fees will be deducted from the amount to be returned.*

**For inquiries regarding the return of the entrance examination fees, please contact**: Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University TEL. +81-27-220-7797

*Applicants who suffered from the Great East Japan Earthquake and disaster from storm and flood will be exempted from the total amount of examination fee as special measures.

*Eligible applicants for exemption from entrance examination fee)*

1. Special measures for the Great East Japan Earthquake.
   1. The applicants who suffered in the areas where the Disaster Relief Act in the Great East Japan Earthquake has been applied, and who fall under any of the following categories.
   1. Applicants whose houses, which are owned by payers of school expenses, were completely destroyed, largely half-destroyed, partially destroyed, or washed away.
   2. Applicants whose payers of school expenses are dead or missing.

2. Applications whose payers of school expenses are recognized that their domiciles were designated as warning areas, deliberate evacuation areas, areas where it is expected that the residents have difficulties in returning for a long time, areas in which the residents are not permitted to live, and areas to which evacuation orders are ready to be lifted due to the Fukushima Daiichi nuclear disaster.

2. Special measures for the disaster from storm and flood

1. The applicants who suffered in the areas where the Disaster Relief Act in the disaster from storm and flood within one year before the application period has been applied, and who fall under any of the following categories.
   1. Applicants whose houses, which are owned by payers of school expenses, were completely destroyed, largely half-destroyed, partially destroyed, or washed away.
   2. Applicants whose payers of school expenses are dead or missing.

2. For further information, please contact the following: Inquiries should be directed to: Admissions Office, Educational Division, Gunma University TEL. +81-27-220-7149

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**Sheet for Certificate of Transfer Receipt or Certificate of Payment [Form-4]**

Paste the "Certificate of Transfer Receipt" or "Certificate of Payment" on the space designated on Form-4.

**Photograph Card [Form-5] Examination Card [Form-6]**

Write your name on the back of the photograph (waist-up, full-face and uncovered head [L4 cm x W3 cm]) taken within three month prior to the application and paste it on the prescribed column in the Photograph Card. Photograph Card and Examination Card must be submitted while still attached (do not cut them apart).
<table>
<thead>
<tr>
<th>Documents</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Certificate of Graduation</td>
<td>The certificate issued by the presidents of the university or the graduate school from which you graduated. However, those who have passed the screening of admission requirements by our Graduate School under Qualifications for Application (I0), and who have graduated from Faculty of Medicine of Gunma University are not required to submit it.</td>
</tr>
<tr>
<td>(or expected graduation)</td>
<td></td>
</tr>
<tr>
<td>7 Certificate of Bachelor's</td>
<td>The certificate proved by the institution which conferred the bachelor’s degree. Attach the academic record supporting conferment of the said degree. (Note) This item 7 applies only to a person who falls under “Qualifications for Application (2)”.</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td>8 Certificate of Bachelor’s</td>
<td>Attach the diploma or other certificate of Bachelor’s Degree which is conferred from the university of educational establishment. This item 8 applies to a person who falls under “Qualifications for Application (6)”.</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td>9 Academic transcript</td>
<td>The transcript issued by the presidents of the university and the graduate school from which you graduated and sealed. However, those who have passed the screening of admission requirements by our Graduate School under Qualifications for Application (9) or (10), and who have graduated from Faculty of Medicine of Gunma University are not required to submit it.</td>
</tr>
<tr>
<td>10 Name and Address Card [Form-8]</td>
<td>Fill out the form attached to the Admission Guidelines or obtained from the homepage.</td>
</tr>
<tr>
<td>11 Self-addressed envelope</td>
<td>The self-addressed envelope with the applicant’s name, address, and postal code written and a ¥362 (JPY 362) stamp posted on it must be attached. In addition, an applicant from overseas is not required to submit it.</td>
</tr>
<tr>
<td>(size No.3)</td>
<td></td>
</tr>
<tr>
<td>12 Written approval for</td>
<td>A working person must submit the written approval for taking examination (the form attached to the Admission Guidelines is designated) issued by supervisor or appointer of workplace.</td>
</tr>
<tr>
<td>taking examination</td>
<td></td>
</tr>
<tr>
<td>(Form-7)</td>
<td></td>
</tr>
<tr>
<td>13 Certificate confirming</td>
<td>A person who has undergone the screening of admission requirements conducted by our Graduate School about whether he/she falls under Qualifications for Application (9) or (10) before applying and has also been proved to have qualifications for application must submit it.</td>
</tr>
<tr>
<td>“Qualifications for Application”</td>
<td></td>
</tr>
<tr>
<td>(A copy of it is acceptable)</td>
<td></td>
</tr>
<tr>
<td>14 Score report in TOEFL, TOEIC</td>
<td>The person in hope of a foreign language (English) examination by TOEFL, TOEIC Listening &amp; Reading Test (Open Test) or IELTS (Academic Module), please submit either one score among TOEFL-PBT, TOEFL-iBT, TOEFL-iTP, TOEIC Listening &amp; Reading Test (Open Test), and IELTS (Academic Module). The score report is limited to the original (which has been issued in less than 2 years). The copy of it is unacceptable.</td>
</tr>
<tr>
<td>Listening &amp; Reading Test (Open</td>
<td></td>
</tr>
<tr>
<td>Test or IELTS (Academic Module)</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Alteration to the contents of the application documents will not be accepted after the acceptance of the application documents.
2. Whatever the reason may be, the application documents accepted will not be returned.
3. When it turns out that matters described in the application documents do not agree with the facts, the success in the examination and the admission may be revoked.
4. An applicant may be requested to submit additional documents other than those listed in the above if our University deems it necessary to confirm the qualifications for application.
5. When your former name is used in each certificate, an official document (family register, etc.) to prove the relation between your current name and former name must be attached.
6. TOEIC Test (Open Test) is also acceptable.

(5) Sending of Examination Card etc.

Examination Card etc. will be sent to the applicant after paperwork following the acceptance of Application documents. If Examination Card etc. should not be sent by January 19 (Fri.), 2018, apply to Admissions Section, Educational Affairs Office, Administration Division, Showa Campus (TEL. +81-27-220-7797, E-mail:kk-mgakumu5@jimu.gunma-u.ac.jp).
5 Preliminary Consultation for Applicants with Disabilities etc.

Gunma University provides academic support to students with disabilities etc.

When you have a disability and need consideration in examination and your study, prior to an application, please consult with our university beforehand.

(1) When to consult

As due date of consultation is December 4 (Mon.), 2017, please consult as soon as possible.

(2) How to consult

Please submit a consultation document (its format is optional) by attaching required documents including a doctor’s certificate.

When necessary, the interview with the persons concerned with the school from which an applicant graduated, or his/her family etc. who can speak for the applicant or his/her position is performed in our university.

(3) Consultation document should be sent to:

Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University, 3-39-22 Showa-machi, Maebashi City, Gunma 371-8511, Japan

TEL. +81-27-220-7797

6 Selection Method

Selection will be made by comprehensive evaluation of the scholastic ability tests (including the oral examination) and the academic transcript issued by the president of the university etc. from which you graduated.

(1) About the examination on foreign language (English)

(1) An applicant who submits the score in TOEFL-PBT (Paper Based Test), TOEFL-iBT (internet Based Test), TOEIC Listening & Reading Test (Open Test) or IELTS (Academic Module) at the time of application can convert the submitted score into the score on the foreign language examination (English) based on the following conversion table for the foreign language examination (English) instead of the written examination. The score in TOEFL-ITP (TOEFL Institutional Testing Program) will also be the subject of evaluation in the same way as the score in TOEFL-PBT.

Furthermore, even the applicant who submits the score in TOEFL, TOEIC Listening & Reading Test (Open Test) or IELTS (Academic Module) which has been issued in less than 2 years shall be valid. The submitted score report, score card or official score certificate of TOEFL, TOEIC Listening & Reading Test (Open Test) or IELTS shall be the original and a copy of it is unacceptable. The original will be returned with the Examination Card.

(2) Conversion table for TOEFL, TOEIC Listening & Reading Test (Open Test) and IELTS (Academic Module)

<table>
<thead>
<tr>
<th>Conversion of English examination</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOEFL-PBT</td>
<td>475 or above</td>
<td>487 or above</td>
<td>500 or above</td>
<td>525 or above</td>
<td>550 or above</td>
<td>600 or above</td>
</tr>
<tr>
<td>TOEFL-iBT</td>
<td>52-53 or above</td>
<td>57 or above</td>
<td>61 or above</td>
<td>70-71 or above</td>
<td>79-80 or above</td>
<td>100 or above</td>
</tr>
<tr>
<td>TOEIC Listening &amp; Reading Test (Open Test)</td>
<td>514 or above</td>
<td>549 or above</td>
<td>586 or above</td>
<td>658 or above</td>
<td>730 or above</td>
<td>874 or above</td>
</tr>
</tbody>
</table>

Conversion of English examination

<table>
<thead>
<tr>
<th>Conversion of English examination</th>
<th>37</th>
<th>51</th>
<th>70</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>IELTS (Academic Module)</td>
<td>5</td>
<td>5,5</td>
<td>6</td>
<td>6,5</td>
<td>7</td>
</tr>
</tbody>
</table>

*TOEIC Test (Open Test) is also acceptable.
7 Date and Locations for Examination

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Examination Subject</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 4</td>
<td>10:00–12:00</td>
<td>Foreign Language (English)</td>
<td>Graduate School of Medicine, Gunma University etc.</td>
</tr>
<tr>
<td>(Sun.), 2018</td>
<td>13:00–15:00</td>
<td>Desired Major Field (Oral Examination)</td>
<td></td>
</tr>
</tbody>
</table>

8 The Aim of Each Examination Subject

Foreign language (English).................The comprehension of English documents and English composition ability will be examined.

*The use of one dictionary, such as English-Japanese dictionary, English-English dictionary or similar dictionary, is allowed (technical dictionary and electronic dictionary, etc. not allowed).

Desired Major Field Area (Oral examination)...... Basic academic ability necessary for engaging in studies in major field and willingness to study will be examined.

*The oral examination will be held by supervisors of major field of your first choice.

**Applicant must contact the supervisor of his/her desired major field before deciding his/her desired major field**

9 Exam Instructions

1. The examination card must be brought with you on taking the entrance examination.
2. Examinees must enter the prescribed examination room by 9:30 a.m. Late arrivals for the examination will be accepted to take the examination within 30 minutes after the start of the examination, but the test time shall not be extended.
3. Examinees must take all tests on the examination subjects assigned, or he/she will be disqualified.
4. When a delay occurs on the public transport on the examination day, please refer to:
   Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University (TEL. +81-27-220-7797)
5. If unexpected incidents (a disaster, an accident, etc.) happen on the day of examination, visit our website (http://www.med.gunma-u.ac.jp/) for your reference. In principle, we will not conduct supplementary examinations.

10 Announcement of Selection Results

Letters of acceptance will be mailed to successful applicants on February 28 (Wed.), 2018. At the same time, successful applicants’ numbers will be posted on the website of “the Graduate School of Medicine and the Faculty of Medicine, Gunma University” on and after 10200 a.m. to the date for admission procedures. Notice about announcement of selection results will not be posted in Gunma University campus.

Additionally, any inquiries about selection results by telephone will not be accepted.
11 Admission Procedures

The successful applicant is required to read the "admissions guide" enclosed with "the letter of acceptance" carefully and must prepare (1) fees and documents for admission procedures, (3) during the period of the admission procedures, and submit them to the (4) place by "mail" or "in person".

(1) Fees and documents for admission procedures

   ① Admission fee: ¥282,000 (JPY 282,000)
   Notes: (a) Any revisions to admission fee on admission during enrollment shall be applied.
   (b) Methods for payment of the admission fee will be informed separately.
   (c) Admission fee paid shall not be returned under any circumstances.

   ② Examination Card

   ③ Any additional documents instructed in the admissions guide.

(2) Fees for after entrance.

   ④ Tuition fee: (first-semester) ¥267,900 (JPY 267,900) (Annual tuition fee: ¥535,800 (JPY 535,800))
   Notes: (a) Any revisions to tuition fees during enrollment shall be applied.
   (b) Methods for payment of the tuition fee will be informed separately.
   (c) Tuition fee including the tuition fee second-semester can be paid at the time of paying the tuition fee for first-semester according to the successful applicant’s wishes.
   (d) If a person who completes the admission procedures declines the admission by March 31 (Sat.), 2018, the amount equivalent to the tuition fee paid shall be returned based on his/her request by following the prescribed procedures.

(3) Period of Admission Procedures

   ○ By mail: The necessary documents must reach the university no later than March 9 (Fri.), 2018.
   ○ In person: The necessary documents must be brought no later than March 9 (Fri.), 2018 (until 5:00 p.m.)

   Note: Whether the procedure is taken “By mail” or “In person”, he/she will be regarded as a person who declines the admission if the admission procedures are not completed by the above deadline.

(4) Fees and documents should be submitted to:

   ○ By mail: Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University, 3-39-22 Showa-machi, Maebashi City, Gunma 371-8511, JAPAN
   ○ In person: Educational Affairs Office, Administration Division, Showa Campus of Gunma University
   (The third floor of Common Building)

12 Additional successful applicants

When the number of persons who complete the admission procedures by March 9 (Fri.), 2018 does not reach the number of students to be admitted, Gunma University may fill vacancies by accepting additional applicants. Notification of acceptance will be made by telephoning the applicant at the contact details indicated in the application form from about 5:00 p.m. on March 9 (Fri.), 2018.

13 Exemption and Postponement of Admission Fee and Tuition Fee

The admission fee or the tuition fee may be exempted in full or by half for admitted students who have difficulty paying due to special circumstances.

Also, the collection of admission fee or tuition fee can be postponed for a certain period for students who have difficulty paying by the specified deadline.

Inquiries should be directed to:
Education and Student Support Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University  TEL. +81-27-220-7796
Gunma University has a system of exemption from admission fee or tuition fee for those recognized as having difficulty in paying due to suffering from the Great East Japan Earthquake.

Gunma University has a system of exemption from admission fee or tuition fee for prominent students with excellent entrance results and academic performance based on the recommendation of each graduate school and educational organization.

Inquiries should be directed to:
Student Life Section, Student Support Office, Educational Division, Aramaki Campus of Gunma University
TEL. +81-27-220-7136

14 Scholarship

Student loan and scholarships are available by Japan Student Services Organization (JASSO) for a person who has difficulty in paying the tuition fee, and who has great academic performance and excellent character.

Inquiries should be directed to:
Education and Student Support Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University
TEL. +81-27-220-7792

15 Disclosure of Admission Information

Admission Information will be disclosed in the following way:

(1) Disclosed on the website of the Graduate School of Medicine and the Faculty of Medicine, Gunma University on and after May 1 (Tue.), 2018. (http://www.med.gunma-u.ac.jp/)

The above information contains number of applicants, number of examinees, number of successful applicants, number of newly enrolled students, the proportion of men to women in the newly enrolled students.

(2) Disclosed by the examinee’s request in written form.

The said examinee’s totaled scores on the entrance examination will be disclosed in written form.

Period for acceptance of disclosure request
From May 1 (Tue.) to May 31 (Tue.), 2018

Admissions Section, Educational Affairs Office, Administration Division, Showa Campus of Gunma University
TEL. +81-27-220-7797

16 Protection of the Personal Information about the Applicants for Admission etc.

Gunma University will acquire the personal information about the applicants etc. through the application documents submitted and the personal information about the examinees by carrying out the entrance examination, but the personal information described above will be used only for the following operations based on “Act on the Protection of Personal Information Held by Independent Administrative Agencies in Gunma University”.

(1) For the operations (including subordinate operation, such as statistical treatment) concerning the selection of newly enrolled students.

(2) For the operations concerning the student advising, the student support, and the tuition fee collection after enrollment as the data on the newly enrolled student in the case of a person who completes the admission procedures.

In addition, our university may be mentioned like above operations to an external company after concluding the contract concerning the appropriate handling of personal information.


**Guidance to Examination Center**

**Address**
Gunma University Course of Medical Sciences in Graduate School of Medicine (Doctoral Program)
3-39-22 Showa-machi, Maebashi City, Gunma 371-8511, Japan
TEL. +81-27-220-7797 (Admission Section, Educational Affairs Office)

**Traffic Information**

<table>
<thead>
<tr>
<th>Bus Stop (get on)</th>
<th>Distination</th>
<th>Bus Stop (get off)</th>
<th>Amount of time</th>
<th>Notes</th>
</tr>
</thead>
</table>
| JR Ryomo Line Maebashi station, North Exit | • Bound for Gunma University Hospital  
• Bound for Aramaki Campus via Gunma University Hospital (including via Nankitsudanchi) | Gunma University Hospital | about 15min | Kan-etsu Transportation |
| Bus Stop 2                   | • Bound for Shibukawa station (including via Gunma University Aramaki Campus)  
• Bound for Shibukawa station circulating city (via Gunma University Aramaki Campus)  
• Bound for Gunma Children’s Medical Center (including via Gunma University Aramaki Campus) | Entrance to Hospital | about 13min and 6min by walk | Kan-etsu Transportation |
| JR Jouetsu Line front of Shibukawa Station | • Bound for Maebashi station (including Shibukawa City Circular, via Gunma University Aramaki Campus) | Entrance to Hospital | about 30min and 6min by walk | Kan-etsu Transportation |

※ There are not any transportations from JR Gunmasouja Station and JR Shinmaebashi Station.
※ Please come to examination center with time to spare by 9:30, after checking the newest traffic information.
Application Forms will be obtained
Admission Section, Educational Affairs Office
December 20 (Wed.) to December 27 (Wed.)
described in 9:00 a.m. to 4:00 p.m.
**GUNMA UNIVERSITY**

How to make a Payment of Examination Fee at Convenience Store or by Credit Card

You can pay the examination fee at a nearby Convenience Store (Lawson, Ministop, FamilyMart, Seven-Eleven, Circle K or Sunkus) by cash, or by a credit card.

---

**1 Online Application**

Visit the payment website from your computer or cell phone at:

https://e-shiharai.net/

*You can not correct or cancel anything once your credit card payment has been made.*

Please check all your information carefully before you confirm the application.

*If you input the wrong information while trying to obtain your application number, please start again from the beginning and make your payment.*

If you fail to pay the fee by the due date which you will be notified after completing the online application, all the information you had input will be canceled automatically.

---

**2 Convenience Store Payment**

The application fee cannot be paid through an ATM. Be sure to make your payment at the counter.

- **7-11**
  - Payment Term Number
  - Card Information
  - Tell the counter staff that you want to make an "Internet Purchase". Then provide your [list Payment Number]
  - A multifunction copier cannot be used to make payment.

- **Lawson**
  - [Lawson Online Payment Request]
  - [Lawson Customer Number]
  - [Lawson Verification Code]
  - Enter your [Lawson Customer Number]

- **FamilyMart**
  - Payment Term Number
  - Card Information
  - Tell the counter staff that you want to make an "Internet Purchase". Then provide your [list Payment Number]
  - A multifunction copier cannot be used to make payment.

- **K-Station**
  - Payment Term Number
  - Card Information
  - Tell the counter staff that you want to make an "Internet Purchase". Then provide your [list Payment Number]
  - A multifunction copier cannot be used to make payment.

- **FamilyMart, FamilyPort, or K-Station issues a funds transfer receipt.**
  - You will need to take this to the cash register within 30 minutes and make the actual payment.
  - Receive an Application Fee Statement. Detach the Certificate of Payment (receipt) portion.

---

**3 Application**

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**Paying at Convenience Store**

Attach the receipt portion to "The Certificate of Payment" in the designated location.

- **Attach Your (Certificate of Payment) to the Application**
  - When attaching the certificate of payment, be sure to use glue which is suitable for use with thermal paper and prevents mincing paper. Please check the glue label.

---

**Paying by Credit Card**

After making your payment, please make sure you have access to a printer with paper A4.

- **Access** "Application Result" (application) at e-shiharai.net.
  - Please fill in "Application Result" (application).
  - Input Receipt Number, and "Internet purchase". Then all of your application information is displayed.
  - Click "print button" and "print the application". Attach the certificate portion to "Certificate of Payment" in the designated location.
  - Envelope in an envelope with all other necessary application documents.

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- **Please confirm the information on the documents and complete your payment within the application period.**
- **If you are paying at a convenience store, please be sure to complete your web application at least 30min before the end of the payment period time.**

In addition, the steps for using information terminals at various convenience stores and payment deadlines for credit card payments are all mentioned in your application guidelines.

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- **You can print a receipt from the "Application Result" page on the Eshiharai site after making credit card payments only.**
- **Please contact your credit card company directly if your card is not accepted.**
Outline of the in Biomedical Sciences Course (Master’s Program)

1 Purpose of setting up the course and specific educational aims

Recent advances in life sciences and information sciences have opened up abundant prospects for applying the achievements of basic research within bio-related industries and new medical services, including drug discovery and regenerative medicine. At the same time, there is a need to solve many challenges, such as medical ethics and information security that are associated with advanced medical technology, and community healthcare support in our aging society, which are opening up a wide range of potential roles for medical researchers and health professionals. Many doors are being opened to non-medical school graduates and trained researchers, educators, and/or highly skilled workers who can exercise leadership in the life sciences and medical fields. However, there is a looming shortage of researchers/educators able to respond to the needs of society and who can take an active role in Biomedical Sciences, this new interdisciplinary field between life sciences and medicine.

There is also a growing number of non-medicine, non-veterinary, and non-dentistry graduates who are hoping to pursue their interest in life science research or medical fields; however, before these graduates can enter a graduate school of medicine to take a PhD course, they either need to have obtained a Master’s Degree or must have more than two years’ research experience at a university or research institute. Gunma University Graduate School of Medicine has been shifting its focus of interest to new interdisciplinary fields. For example, in 2003, we re-organized our Medical Sciences Course (Doctoral Program) and our research and educational system into a basic plus clinical integrated style, and established a PhD program in health sciences, now being run by the Graduate School of Health Sciences. The implementation of a day/evening course system for both programs allowed us to offer the course to mature students not from only the medical and health science fields, but also from related fields. However, we were still unable to accept graduates from facilities other than medicine, veterinary, or dentistry directly to our medical sciences course.

In response to increasing demand, and to broaden our intake of graduates from other faculties, we have established a Biomedical Science Course (Master’s program) within the Graduate School of Medicine. This program aims to educate non-medical school graduates in the fundamental knowledge and skills needed to engage in the type of independent research that increasingly underpins medical and life sciences, and to foster leadership in medical-related fields on the part of health professional experts.

2 Academic discipline and research targets

Biomedical Sciences is a general term for the life sciences field, which overlaps medicine, life sciences, and other medical interdisciplinary fields. The Biomedical Sciences Course is designed to draw together life sciences and traditional basic medicine/clinical medicine (anatomy, physiology, biochemistry, cell biology, molecular biology, genetics, pharmacology, neuroscience, microbiology, parasitology, pathology, forensic medicine, hygiene, public health, medical ethics, medical informatics, internal medicine, surgical medicine, obstetrics and gynecology, otorhinolaryngology, rehabilitation medicine, clinical laboratory medicine, nuclear medicine, oncology, radiology, clinical pharmacology, pediatrics, psychiatry, etc.) as educational and research subjects to promote the elucidation of biological processes from a medical perspective and to establish Biomedical Sciences as a discipline that is aimed at the creation of new medical care: not only diagnosis and treatment, but also the promotion of health and improvement of quality of life.

We extended our research targets to medical physics, a field of growing importance, in academic year 2009, and will continue to promote broader biomedical science research.

3 Curriculum

1) Class subjects are divided into three subdivisions: basic subjects, practical subjects, and subjects suitable for research.

2) Of the basic subjects needed to be taken in the first year, fundamental knowledge of life sciences/medicine and basic techniques of the type required for biomedical science research will be acquired in the required subjects. This will place all students on the same footing. Basic factors within Biomedical Sciences that are needed in
multiple major field will be acquired in the elective subjects. Students who do not decide on a major field on 
beginning the course will be able to gain an understanding of current problems in medical-related fields, and 
make their decision based on their specialties, abilities and wishes by the end of the first semester of the 1st 
year while taking these basic subjects.

3 ) Of the practical subjects offered, elective subjects can be selected that are appropriate to the student’s 
research project or career options after earning their Master’s Degree. These subjects will advance the 
understanding of the applicable and practical knowledge required to pursue Biomedical Science research in 
research area and/or to further improve expertise.

4 ) Research subjects designed to promote the acquisition of knowledge needed to propose and implement a 
research project, and techniques for presentation of research results.

4 Others

Educational courses in Biomedical Sciences promote specialization in the following subjects.

Medical Physics Course

In this course, established in 2009, we train medical physics professionals who will be able to expand the 
development of highly-advanced medical technologies such as heavy particle radiotherapy using high-energy 
carbon ion beams and intensity-modulated radiation therapy using X-rays.

International Training Program for Experts in Medical Physics

This course is designed for prospective leaders in medical physics. The International Training Program for Co-
operative Experts in Clinical Oncology, applied by the University of Tsukuba, was selected as a Promotion Plan for 
the Platform of Human Resource Development for Cancer, launched by the Ministry of Education, Culture, Sports, 
Science and Technology (MEXT) in 2012. In this course, we use unique teaching methods that employ e-learning 
strategies.

Cooperative Master’s Education for Global Leaders in Heavy Ion Therapeutics and Engineering for 
Prospective Doctoral Courses

The Program for Cultivating Global Leaders in Heavy Ion Therapeutics and Engineering, proposed by Gunma 
University and selected as a Leading Program in Doctoral Education, was launched by MEXT in 2011. was 
launched by MEXT in 2011. Accordingly, after enrollment of PhD program at Graduate School of Medicine, 
graduates of Biomedical Sciences Course may register this program. If application is approved, it is possible to 
complete the Doctoral Course in three years.

Radiation Biomedical Science Course

It provides basic knowledge of radiation science by studying linkage subjects in cooperation with Gunma 
Prefectural College of Health Sciences.

Asian Nuclear Medicine Graduate Program (ANMEG Program)

(Special Programmes with MEXT Scholarships Guaranteed for International Students)

This program started in autumn 2013.

The mission of this program is to train specialists in Nuclear Medicine destined to become leading clinicians and 
researchers, both in their home countries and at the international level.

Applicants eligible for the Master’s Course are individuals licensed as radiological technologists or who have 
completed a Bachelor’s Course in natural sciences in their home countries. Technologists and researchers based in 
universities and university hospitals are preferred, but this is not an absolute requirement.

<table>
<thead>
<tr>
<th>Region</th>
<th>Major Field</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Medicine</td>
<td>Anatomy</td>
<td>Hiroshi Yorifuji *</td>
</tr>
<tr>
<td></td>
<td>Anatomy and Cell Biology</td>
<td>Toshiyuki Matsuzaki</td>
</tr>
<tr>
<td></td>
<td>Molecular and Cellular Neurobiology</td>
<td>Yasuki Ishizaki</td>
</tr>
<tr>
<td></td>
<td>Biochemistry</td>
<td>Takashi Izumi</td>
</tr>
<tr>
<td></td>
<td>Integrative Physiology</td>
<td>Noriyuki Kobuchi</td>
</tr>
<tr>
<td></td>
<td>Neuropsychology and Neural Repair</td>
<td>Hirokazu Hirai</td>
</tr>
<tr>
<td></td>
<td>Neurobiology and Behavior</td>
<td>Tomoaki Shirao</td>
</tr>
<tr>
<td></td>
<td>Genetic and Behavioral Neuroscience</td>
<td>Yuchio Yanagawa</td>
</tr>
<tr>
<td></td>
<td>Molecular Pharmacology and Oncology</td>
<td>Masahiko Nishiyama</td>
</tr>
<tr>
<td></td>
<td>Bacteriology</td>
<td>Haruyoshi Tomita</td>
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<td></td>
<td>Parasitology</td>
<td>(Undecided)</td>
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<td>Public Health</td>
<td>Hiroshi Koyama</td>
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<tr>
<td></td>
<td>Legal Medicine</td>
<td>Yoshihiko Komimoto</td>
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<tr>
<td></td>
<td>Medical Philosophy and Ethics</td>
<td>Kenji Hattori</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular Medicine</td>
<td>Masahiko Kurabayashi</td>
</tr>
<tr>
<td></td>
<td>Endocrinology and Metabolism</td>
<td>Masanobu Yamada</td>
</tr>
<tr>
<td></td>
<td>Gastroenterological Surgery</td>
<td>Hiroyuki Kuwano</td>
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<tr>
<td></td>
<td>Radiation Oncology</td>
<td>Takashi Nakano</td>
</tr>
<tr>
<td></td>
<td>Diagnostic Radiology and Nuclear Medicine</td>
<td>Yoshibo Tashima</td>
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<tr>
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<td>Psychiatry and Neuroscience</td>
<td>Masato Fukuda</td>
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<td></td>
<td>General Practice Medicine</td>
<td>Junichi Tamura</td>
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<td>Rehabilitation Medicine</td>
<td>Naoki Wada</td>
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<tr>
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<td>Clinical Laboratory Medicine</td>
<td>Masami Murakami</td>
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<tr>
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<td>Human Pathology</td>
<td>Hiwaki Yokoo</td>
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<td></td>
<td>Diagnostic Pathology</td>
<td>Tetsunari Oyama</td>
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<td>Pediatrics</td>
<td>Hirokazu Arakawa</td>
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<tr>
<td></td>
<td>Obstetrics and Gynecology</td>
<td>(Under Selection)</td>
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<td></td>
<td>Urology</td>
<td>Kazuhiro Suzuki</td>
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<tr>
<td></td>
<td>Otolaryngology-Head and Neck Surgery</td>
<td>Kazuaki Chikamatsu</td>
</tr>
<tr>
<td></td>
<td>Clinical Pharmacology</td>
<td>Koujiro Yamamoto</td>
</tr>
<tr>
<td></td>
<td>Quality and Safety in Healthcare (tentative)</td>
<td>(Under Selection)</td>
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<tr>
<td></td>
<td>(University Hospital)</td>
<td>Tetsuya Nakamura</td>
</tr>
<tr>
<td></td>
<td>Clinical Trials and Regulatory Science</td>
<td>Yuichiro Saito (Associate Professor)</td>
</tr>
<tr>
<td></td>
<td>Medical Informatics</td>
<td></td>
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<tr>
<td></td>
<td>(Institute for Molecular and Cellular Regulation)</td>
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<tr>
<td></td>
<td>Molecular Traffic</td>
<td>Ken Sato</td>
</tr>
<tr>
<td></td>
<td>Medical Neuroscience</td>
<td>Akiko Hayashi-Takagi</td>
</tr>
<tr>
<td></td>
<td>Secretion Biology</td>
<td>Seiji Torii (Associate Professor)</td>
</tr>
<tr>
<td></td>
<td>Molecular Membrane Biology</td>
<td>Miyuki Sato (Associate Professor)</td>
</tr>
<tr>
<td></td>
<td>Molecular Endocrinology and Metabolism</td>
<td>Tetsuro Izumi</td>
</tr>
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<td></td>
<td>Developmental Biology and Metabolism</td>
<td>Yoshio Fujitani</td>
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<tr>
<td></td>
<td>Metabolic Signaling</td>
<td>Tadahiro Kitamura</td>
</tr>
<tr>
<td></td>
<td>Laboratory of Epigenetics and Metabolism</td>
<td>Takeshi Inagaki</td>
</tr>
<tr>
<td></td>
<td>Molecular Genetics</td>
<td>Takayuki Yamashita</td>
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<td></td>
<td>Genome Sciences</td>
<td>Izuhisa Hatada</td>
</tr>
<tr>
<td></td>
<td>Laboratory of Integrated Signaling Systems</td>
<td>Tohru Ishitani</td>
</tr>
<tr>
<td></td>
<td>(Heavy Ion Clinical Medicine)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medical Physics and Biology for Ion Therapy</td>
<td>Masami Torikoshi</td>
</tr>
<tr>
<td></td>
<td>Heavy Ion Clinical Medicine</td>
<td>Akihisa Takahashi</td>
</tr>
<tr>
<td></td>
<td>(Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology)</td>
<td>Tatsuya Ohno</td>
</tr>
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<td>Quantum Biology</td>
<td>Yasuyuki Ishii</td>
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<td>Yushihiro Kobayashi</td>
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<td>Tomoo Funayama</td>
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<td>Anatomy</td>
<td>Hiroshi Yorifuji</td>
<td><strong>Ext. 7910 <a href="mailto:yorifuji@gunma-u.ac.jp">yorifuji@gunma-u.ac.jp</a></strong></td>
<td>Research themes of our laboratory are 1) molecular cell biology of functional proteins of the skeletal muscle and 2) expression and function of cell adhesion molecules during early development. For the former, we are now concentrating on studying cytoskeletal anchoring systems to the sarcomemma and vesicular sorting systems. For the latter, we are studying cadherin-superfamily proteins with in situ hybridization technique using zebrafish embryos that are characterized by transparency in early development. [Keywords] skeletal muscle, cytoskeleton, vesicular sorting system, embryogenesis, cell adhesion proteins</td>
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<td>Anatomy and Cell Biology</td>
<td>Toshiyuki Matsuzaki</td>
<td><strong>Ext. 7900 <a href="mailto:matoshi@gunma-u.ac.jp">matoshi@gunma-u.ac.jp</a></strong></td>
<td>We are interested in membrane channel proteins and transporter proteins, especially in water channel aquaporins. Our goal is to understand their physiological functions and relationships between these proteins and diseases. To understand the physiological functions of these proteins, we investigate their tissue distributions and cellular localizations as well as their changes by using bio-imaging techniques such as immunofluorescence microscopy and immunoelectron microscopy, as well as techniques in molecular biology. [Keywords] membrane protein, water channel, transporter, immunofluorescence microscopy, immunoelectron microscopy, molecular biology</td>
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<td>Molecular and Cellular Neurobiology</td>
<td>Yasuki Ishizaki</td>
<td><strong>Ext. 7950 <a href="mailto:yasukiishizaki@gunma-u.ac.jp">yasukiishizaki@gunma-u.ac.jp</a></strong></td>
<td>We are studying the cells in the CNS from their birth to death. We aim to elucidate the molecular basis of the control of proliferation, differentiation, and survival of neural precursor cells, hoping that our results will contribute to the treatment of intractable CNS diseases in the near future. We are also studying the interaction between neural cells and vascular cells in the CNS. [Keywords] neural stem cells, neuronal precursor cells, glial precursor cells, glial cells, vascular cells, regenerative medicine</td>
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<td>Basic Medicine</td>
<td>Takashi Izumi</td>
<td><strong>Ext. 7940 <a href="mailto:takashi_iizumi@gunma-u.ac.jp">takashi_iizumi@gunma-u.ac.jp</a></strong></td>
<td>Our research projects aim to clarify turnover of cell membrane phospholipids on various kinds of stimulation, production of bioactive lipids (lipid mediators), signal transduction through their GPCRs, and function of these bioactive lipids, using methods of biochemistry, molecular biology and cell biology. Lipid mediators may be involved in various pathological processes such as inflammation, allergic reaction, neurological disorders, and cancer proliferation. We are also working on analysis of signal transduction through DNA double strand break, and exhaustive analysis of protein and metabolite by mass spectrometry. [Keywords] Lipid mediator, GPCR, Signal transduction, DNA double strand break, Proteome, Metabolome</td>
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<td>Integrative Physiology</td>
<td>Noriyuki Koibuchi</td>
<td><strong>Ext. 7920 <a href="mailto:nkoibuchi@gunma-u.ac.jp">nkoibuchi@gunma-u.ac.jp</a></strong></td>
<td>Small lipophilic hormones such as steroid and thyroid hormones play a crucial role in the development and functional maintenance of various organs including the central nervous system. On the other hand, there are drugs and environmental chemicals whose structures are similar to those of such hormones. Such chemicals may disrupt endogenous hormone actions as either an agonist or antagonist. We study the effect of small lipophilic hormones on organ development and plasticity, and modulation by environmental chemicals and drugs on such process, using various techniques including behavioral analysis with gene modified animals, and cellular and molecular biological techniques. [Keywords] hormone, development, plasticity, regeneration, environmental factors, endocrine disruption</td>
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<tr>
<td>Neurophysiology and Neural Repair</td>
<td>Hirokazu Hirai</td>
<td><strong>Ext. 7930 <a href="mailto:hirai@gunma-u.ac.jp">hirai@gunma-u.ac.jp</a></strong></td>
<td>We are studying the mechanism underlying memory, learning and motor control as well as brain disorders and aging in terms of molecular, cellular, network and behavioral aspects. Our challenge includes development of novel therapies effective for the brain disorders. To pursue these aims, we are developing cutting-edge techniques such as novel viral vectors, genome editing technology and disease model non-human primates. Our laboratory has sufficient experimental setup to perform world top-level research. [Keywords] Memory; Learning; Motor control; Regenerative medicine; Viral vector; Neurodegenerative disease; Marmoset; Non-human primate model; Aging; Stem cell therapy; Gene therapy; Patch clamp</td>
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<td>Neurobiology and Behavior</td>
<td>Tomosuki Shirao Ext. 8050 <a href="mailto:tshira@gunma-u.ac.jp">tshira@gunma-u.ac.jp</a></td>
<td>To understand the regulatory mechanisms of synapse morphology and function, we have studied the actin cytoskeleton in postsynaptic sites. For this research, primary cultured neurons, human iPS cells-derived neurons and knockout mice have been used with various experimental techniques including cell biology, biochemistry, molecular biology, neuronal cell culture, histochemistry, imaging and behavioral analysis. In addition, we have also studied about the effects of radiation on the synapses. These studies will shed light on the mechanisms of brain function and development of new diagnostic and therapeutic methods for neurological and psychiatric disorders. <strong>[Keywords]</strong> Synaptic morphology and function, Actin cytoskeleton, Imaging techniques, Human iPS cells-derived neurons, Radiation damage, High-throughput put</td>
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<td>Genetic and Behavioral Neuroscience</td>
<td>Yuchio Yanagawa Ext. 8040 <a href="mailto:yuchio@gunma-u.ac.jp">yuchio@gunma-u.ac.jp</a></td>
<td>We are studying the role of neurotransmitter GABA in brain functions such as emotion and the properties of GABAergic neurons through the generation and analyses of genetically engineered rodents such as conditional knockout mice and transgenic rats. We are also interested in the relationship between the deficits in GABAergic neurons and neuropsychiatric disorders. We have established model mice for schizophrenia or epilepsy and are characterizing them to elucidate the pathogenesis and/or pathophysiology of these disorders. <strong>[Keywords]</strong> neurotransmitter, GABA, knockout mice, transgenic rats, neuropsychiatric disorders, model mouse</td>
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<td>Basic Medicine</td>
<td>Molecular Pharmacology and Oncology</td>
<td>Masahiko Nishiyama Ext. 7960 <a href="mailto:m.nishiyama@gunma-u.ac.jp">m.nishiyama@gunma-u.ac.jp</a></td>
<td>The development of molecular targeting drugs has accelerated advances in drug treatment for cancer. Students study the interaction of drugs in the levels of molecular, cellular, tissue, organ and an individual in order to better understand the mechanisms, and challenge translational research that facilitates the translation of findings from basic science to practical applications, which might lead to new drug discoveries, identification of novel biomarkers, and development of novel anti-cancer therapies: Students experience a variety of research processes of drug development from genome-wide screening of novel medical seeds to mega-clinical trial to evaluate the efficacy and toxicity of new drugs or therapies. <strong>[Keywords]</strong> cancer, translational research, drug action mechanisms, genome-based drug discovery, oncology biomarker</td>
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<td>Bacteriology</td>
<td>Haruyoshi Tomita Ext. 7990 <a href="mailto:tomitaha@gunma-u.ac.jp">tomitaha@gunma-u.ac.jp</a></td>
<td>Nosocomial infections caused by multi-drug resistant (MDR) bacteria have increased and become a worldwide social problem. Our research is focused on the major causative MDR bacteria including methicillin-resistant Staphylococcus aureus (MRSA), vancomycin-resistant enterococci (VRE), MDR Pseudomonas aeruginosa and MDR Acinetobacter baumannii. The drug resistances and pathogenicities of MDR bacteria are examined by molecular biological methodology. The molecular mechanisms of bacterial genetic exchange system which is a significant factor for the spread of drug resistance and virulence genes are also studied. <strong>[Keywords]</strong> multi-drug resistant bacteria, VRE, MDRP, enterococcus, bacteriocin, conjugative plasmid, transposon</td>
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<td>Parasitology</td>
<td>Yasuki Ishizaki (Dean) Ext. 7950 <a href="mailto:yasukiishizaki@gunma-u.ac.jp">yasukiishizaki@gunma-u.ac.jp</a></td>
<td>Malaria is one of the most life-threatening infections like AIDS and tuberculosis. Our research interest is host-parasite relationship in malaria. Specifically, immune responses to malaria parasites and pathogenesis of malaria parasites are analyzed in detail. We aim to develop vaccines and drugs to control malaria by revealing host-parasite relationship from both host and parasite points of view. <strong>[Keywords]</strong> Malaria, host-parasite relationship, immunity, vaccine</td>
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| Medical Philosophy and Ethics | Kenji Hattori        | Ext. 8037 hattorik@gunma-u.ac.jp         | Medical practices in the clinical setting as one of existential situations are fraught with troublesome problems in terms of actual human ways of life. Clinical ethics is tackling them by, not applying some general principles or abstract doctrines mechanically to every case, but paying close attention to the individual circumstances of each case. We have been involved in the groundwork for the methodology of clinical ethics from the perspective of hermeneutics and philosophy of literature. Ethical problems in preventive medicine, the method of teaching medical ethics, meta-ethical approaches to medical ethics, and critically examining the fundamental concepts such as health and disease, are also of our core concern.  
**[Key words]**
clinical ethics, medical ethics, philosophy of medicine, medical ethics education |
| Cardiovascular Medicine     | Masahiko Kurabayashi | Ext. 8140 mkuraba@gunma-u.ac.jp           | According to the change of life style and an increase in aged population, the prevalence of hypertension, diabetes, and metabolic syndrome is rapidly increasing. These changes lead to the increase in cardiovascular disease such as myocardial infarction, stroke and heart failure. This department has been interested in the pathogenesis of atherosclerosis and heart failure. In addition, this department aims to identify the molecular target to prevent or treat the fatal arrhythmia. Furthermore, we are interested in the molecular mechanism of pulmonary fibrosis. Since the completion of human genome sequence determination, life science enters into post-genome era that make possible development of tailor-made medicine, and advances in high-throughput genotyping herald a rapid expansion of genomic information in human disease. Recently, this department has been interested in the identification of biomarkers that have incremental value for prevention of cardiovascular and pulmonary disease, and key molecules that are targetable by drugs. With identification of putative risk alleles for heart failure or pulmonary fibrosis, the next step will be exploration of the function of the genes and prospective clinical trials evaluating the benefits of genotype-directed treatment of cardiovascular and pulmonary disease.  
**[Key words]**vascular biology, atherosclerosis, heart failure, myocardial infarction, transcription factors |
| Basic Medicine              | Yoshihiko Kominato   | Ext. 8030 kominato@gunma-u.ac.jp          | Legal medicine is essentially the application of scientific methods and techniques to matters involving the public that covers a lot of ground. Every science from chemistry to medicine, from biology to statistics, from dentistry to anthropology, can be a forensic science if it has some applications to the law or public matter. Especially, our group has been focusing on personal identification, which is one of the important matters of legal medicine in Japan. We have performed researches on ABO blood group, which is one of the important genetic markers in human identification. Recently, we have succeeded in identifying the erythroid cell-specific enhancer and found the deletion or impairment of the enhancer element in variant blood type Bm, leading to the development of valuable methods for the genetic diagnosis of Bm based on PCR analysis.  
**[Key words]**
Legal medicine, personal identification, ABO blood group, enhancer |
| Public Health               | Hiroshi Koyama       | Ext. 8010 hkoyama@gunma-u.ac.jp           | Public Health is the art and science to delineate the environmental and social determinants of health, and to reduce the harmful factors and to promote the supportive factors for health through the organized community efforts. Our research topics include, the protective effect of trace elements on the development of cancer and metabolic syndrome, analytical studies of trace elements using HPLC-ICP-MS method, depression screening-test for the suicide prevention, and the epidemiology of the relationship between QOL and insurance system and community organization. We also examine health equity and public health ethics.  
**[Keywords]**trace element, selenium, cancer prevention, depression screening, and epidemiology, public health ethics |
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| Endocrinology and Metabolism  | Masanobu Yamada Ex. 8120            | myamada@gunma-u.ac.jp             | Cancer, and apoplexy and myocardial infarction due to arteriosclerosis, which account for two thirds of deaths in Japan, are caused by abnormalities of endocrine and metabolic systems, various gene mutations, and/or viral infection. We have investigated the pathogenesis of these disorders using animal models such as knockout mice, and examined gene abnormalities of samples obtained from the surgery to establish new methods of the diagnosis and therapy.  
**Keywords:** lifestyle-related diseases, endocrine-metabolic disorders, diabetes mellitus, respiratory allergy disorders, hepatobiliary-digestive disorders |
| Gastroenterological Surgery   | Hiroyuki Kuwano Ex. 8220            | hkuwano@gunma-u.ac.jp             | In Division of Gastroenterological Surgery, researches for whole digestive tract are included. A wide variety of research, which including mechanism of carcinogenesis, growth and invasion of tumor, metastasis of tumor, suppressive research of malignancy and gastrointestinal motility research with conscious dogs, it will read to new therapeutic treatment have been energetically performed. Moreover, several clinical researches including development of excellent diagnostic method and therapeutic method have been performed continuously for the future.  
**Keywords:** gastrointestinal surgery, carcinogenesis, gastrointestinal motility, excellent diagnostic method, development of therapeutic method |
| Clinical Medicine             | Takashi Nakano Ex. 8380             | tnakano@gunma-u.ac.jp             | The Department of Radiation Oncology practices radiation therapy for various cancers comprehensively. It undertakes basic research on radiation induced apoptosis, modulation of radiation sensitivity by cell cycle regulatory proteins, hypoxia, cell proliferation proteins, oncogenes, and cancer vasculature. In addition, clinical researches on heavy ion radiotherapy, combination of molecular targeted therapy with radiation, image based brachytherapy, and high precision radiotherapy (IMRT,SBRT, etc) are extensively conducted and promoted.  
**Keywords:** radiation therapy, heavy ion therapy, radiation biology, radiation oncology, radiation pathology |
| Radiation Oncology            | Yoshito Tsuchiwa Ex. 8400           | yoshitosushi@gunma-u.ac.jp        | After the discovery of X-ray CT, there have been incredible advances in diagnostic imaging and it is now indispensable to modern medical care. In addition to CT, MRI, Ultrasound, PET, and SPECT, and the image-guided, minimally invasive techniques of interventional radiology and radioisotope therapy contribute to patient quality of life, and are also hoped to advance medical care. This field researches and new techniques in combining morphological and functional imaging and developing “patient-friendly” treatment methods such as interventional radiology and radioisotope therapy.  
**Keywords:** Diagnostic Radiology, Nuclear Medicine, CT, MRI, US, SPECT, PET, Interventional Radiology |
| Diagnostic Radiology and Nuclear Medicine | Yoshito Tsuchiwa Ex. 8400 | yoshitosushi@gunma-u.ac.jp | Development in neurosciences and brain sciences is just revealing brain dysfunctions for etiology and pathophysiology of psychiatric disorders using neuroimaging and genetic studies. Department of Psychiatry and Neuroscience endeavors to clarify etiology and pathophysiology of “mental dysfunction” employing structural neuroimaging such as MRI, functional neuroimaging such as PET and NIRS, neurophysiology such as MEG, neuroendocrine stress responses such as DST, and animal model of psychiatric disorders.  
**Keywords:** psychiatric disorder, neuroimaging, stress, mental illness, brain function |
| Psychiatry and Neuroscience   | Masato Fukuda Ex. 8180              | fukuda-psy@gunma-u.ac.jp          | Development in neurosciences and brain sciences is just revealing brain dysfunctions for etiology and pathophysiology of psychiatric disorders using neuroimaging and genetic studies. Department of Psychiatry and Neuroscience endeavors to clarify etiology and pathophysiology of “mental dysfunction” employing structural neuroimaging such as MRI, functional neuroimaging such as PET and NIRS, neurophysiology such as MEG, neuroendocrine stress responses such as DST, and animal model of psychiatric disorders.  
**Keywords:** psychiatric disorder, neuroimaging, stress, mental illness, brain function |
| General Practice Medicine     | Junichi Tamura Ex. 8665             | jtamura@gunma-u.ac.jp             | In our department, we are going to study about many problems in gerontology, especially methods of nutrition for old people. We are interested in the effects of the lack of trace elements on immune systems or protection to infectious disease.  
**Keywords:** general medicine, gerontology, primary care, nutrition |

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| Rehabilitation  | Medicine                  | Naoki Wada Ext. 8655 nwada@gunma-u.ac.jp   | Rehabilitation medicine is a transverse field of diagnostic as well as therapeutic medicine for infant-to-elder patients with a great variety of diseases. The course of rehabilitation medicine consists of basic knowledge of rehabilitation medicine, which are kinesiology, central and peripheral nerve system, respiratory, cardiac systems and psychiatry. The students discuss the methods for evaluation of disabilities and the equipment for the measurements. The indications of scales, rating scores and other evaluation methods for functional and mental disorders will be studied. Biological and cytological methods are also applied to the analysis, and the cellular reaction by physical stimulation will be observed. Statistical analysis will be indicated for the measurements and evaluations. Investigation of the results and publishing some conclusions in the journal is the purpose of the courses.  
|                 |                           |                                            | [Keywords] disability medicine, diagnostic medicine, therapeutic medicine, kinesiology                                                                                                                                                    |
| Clinical        | Laboratory Medicine       | Masami Murakami Ext. 8550 murakami@gunma-u.ac.jp | Modern medicine and preventive medicine aim at the evidence based medicine (EBM). Clinical laboratory medicine plays a key role in EBM. Therefore the research field of clinical laboratory medicine extends to every field. We are investigating sports medicine and pathophysiology of diabetes, thyroid diseases, atherosclerosis and infectious diseases using gene analysis and new methods. 
|                 |                           |                                            | [Keywords] gene analysis, diabetes mellitus, thyroid disease, atherosclerosis, infectious diseases, sports medicine, clinical laboratory medicine, lifestyle-related disease                                                                 |
| Clinical        | Medicine                  | Hideaki Yokoo Ext. 7970 hyokoo@gunma-u.ac.jp | Pathology has dual aspects, one is basic science that aims to investigate causes of diseases, and the other is pathological diagnosis and classification of diseases. We shed light on neuropathology for years, and investigate pathogenesis, pathological diagnosis, and novel therapy of various diseases of the nervous system. Especially, our research group consistently plays a central role of brain tumor pathology of Japan for decades. We chiefly handle human samples, and also possess original transgenic animals prone to brain tumors. 
|                 |                           |                                            | [Keywords] neuropathology, brain tumor, molecular and cytogenetics of tumor, glial cells, translational research                                                                                                                                  |
| Diagnostic      | Pathology                 | Tetsunari Oyama Ext. 7980 oyama@gunma-u.ac.jp | Cancer is a “genetic disease” and oncogene and tumor suppressor genes have a great influence to carcinogenesis. Most cancers develop by multi-step accumulation of genetic mutation with environmental and morphological changes. The main purpose of the course is to clarify the genetic change from morphological change or gene-related protein expression during cancer development and feedback to the diagnostic tumor pathology. 
|                 |                           |                                            | [Keywords] cancer morphology, multi-step carcinogenesis, oncogene, tumor suppressor gene, protein expression                                                                                                                                  |
| Pediatrics      |                           | Hirokazu Arakawa Ext. 8200 harakawa@gunma-u.ac.jp | Chromatin is the most gigantic intra-cellular structure, which consists of genomic DNA with a length of more than 2 meters and associated proteins. Understanding of how this gigantic structure is organized and stored in the nucleus with a radius of ~10 micro meters while being ready to exert a wide variety of its coordinated functions is a central question. Our aim is to reveal regulatory mechanisms of gene expression in differentiating neural cells and post-mitotic neurons to understand brain development and its functions. We specifically focus on sub-nuclear spatial organization and post-translational modifications of chromatin, and their relevance in gene regulation in the nervous system. 
<p>|                 |                           |                                            | [Keywords] Chromatin, nuclear organization, epigenetics, transcription, neural cells                                                                                                                                                     |</p>
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| Obstetrics and Gynecology      |                               | Hiroshi Kishi (Associate Professor) Ext. 8423 hrskishi@gunma-u.ac.jp | The understanding of hormonal effects and interactions on the hypothalamic-pituitary-ovarian axis is important for comprehending reproductive physiology and pathophysiology. The hormones work on the axis in a well-coordinated way and maintain physiological homeostasis. The aim of our research is to understand the functions of hormones at the molecular level, leading to the discovery of biologically active substances such as hormones and growth factors and their functional mechanisms. Our research involves the interrelationship between structures and functions of hormone receptors to elucidate the functions and mechanisms of actions of gonadotropin receptors.  
  **Keywords** LH receptor, FSH receptor, mutation, intracellular signal transduction, epigenetics |
| Urology                        |                               | Kazuhiro Suzuki Ext. 8300 kazu@gunma-u.ac.jp | Our department has focused on understanding of the pathophysiology of prostate cancer. Basic studies cover genetic analysis, the role of lipids and intratumoral hormonal environments. Clinical studies cover the role of the tumor marker PSA and screening of prostate cancer.  
  **Keywords** Urological tumor, prostate cancer, androgen dependency, screening |
| Otolaryngology Head and Neck Surgery |                               | Kazuaki Chikamatsu Ext. 8350 tikamatu@gunma-u.ac.jp | Antitumor immunity plays an important role in protection against the development of malignancy. However, with a developing tumor, tumor cells acquire various mechanisms to corrupt the host antitumor responses, escape from immunosurveillance system, and grow in the host. The followings are current studies being conducted. 1) Immunological analysis of T cells in patients with head and neck cancer 2) Analysis of interaction between tumor cells and stromal cells in head and neck cancer  
  **Keywords** head and neck cancer, immunosuppression, cancer vaccine, tumor microenvironment |
| Clinical Medicine              | Clinical Pharmacology         | Koujirou Yamamoto Ext. 8743  
  koujirou@gunma-u.ac.jp | Recently, many new drugs with novel mechanisms have produced to improve the clinical efficacy of drug therapy; however, the development of new drugs also have produced a lot of new problems to be solved. In the pharmacotherapy, the choice of appropriate therapy or drugs for each individual patient is imperative. To establish safe and effective pharmacotherapy, we focus the variation factors for clinical efficacy of drug therapy for several diseases with gene analysis and pharmacokinetic approaches.  
  **Keywords** Clinical pharmacology, pharmacokinetics, genetic polymorphisms, individualization of drug therapy |
| Quality and Safety in Healthcare (tentative) |                               | Yasuki Ishizaki (Dean) Ext. 7950 yasukiishizaki@gunma-u.ac.jp | This department was newly founded in April of 2017 to study and promote quality and safety in healthcare, cooperating with international organizations such as WHO, etc. We are now selecting a candidate for the professor of this department. Refer to Professor Ishizaki, Dean of Graduate School of Medicine, for further information. |
| Cooperative Department and Joint | Clinical Trials and Regulatory Science | Tetsuya Nakamura Ext. 8740  
  nakamurt@gunma-u.ac.jp | Clinical trials and research are advanced very rapidly and changed dramatically in recent years. We conduct and support a variety of clinical trials in our hospital and in our community to establish highly qualified clinical evidence. We continuously improve our knowledge and skills about trial design, data management, statistical methods, regulatory science or ethical issues in daily practice. We are trying to open a door for new world of clinical research science.  
  **Keywords** clinical research, study design, statistics |
| Medical Informatics            |                               | Yuichiro Saito (Associate Professor) Ext. 8771 saitoyui@gunma-u.ac.jp | Today’s rapid growth of hospital information systems produces huge amount of data and excellent infrastructure to let clinicians to access them. This seminar aims to learn methodology contributing human health care using medical information system. It has been exploring and presenting required data via hospital information system using ubiquitous computing technologies.  
  **Keywords** medical information, health care, hospital information system |
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<td>Molecular Traffic</td>
<td>Ken Sato Ext. 8840 <a href="mailto:sato-ken@gunma-u.ac.jp">sato-ken@gunma-u.ac.jp</a></td>
<td>Membrane trafficking plays essential roles not only in secretion and nutrient uptake but also in various physiological processes such as the endocrine system, the metabolic system, the nervous system, and animal development. In our laboratory, we study the molecular mechanisms and physiological functions of membrane trafficking in multicellular organisms by using the nematode Caenorhabditis elegans and mice as model systems. <strong>Keywords</strong> membrane trafficking, secretion, metabolism, development, C. elegans, knockout mouse</td>
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<td>Medical Neuroscience</td>
<td>Akiko Hayashi-Takagi Ext. 8850 <a href="mailto:hayashitakagi@gunma-u.ac.jp">hayashitakagi@gunma-u.ac.jp</a></td>
<td>The deterioration of the synapses has attracted attention as the pathophysiology of neuropsychiatric disorders. Thus, we examine the relationship between the structural and functional property of synapse and behavioral manifestations by utilizing in vivo 2-photon imaging. Furthermore, we also utilize novel optogenetic tools, which can manipulate the plasticity of the synapse in order to alter neurocircuits by extension changing the behaviors. By these two strategies, we pursue the cellular mechanism of neuropsychiatric disorders to identify a novel therapeutic target for disorders. <strong>Keywords</strong> neuropsychiatric disorders, synapse, 2-photon imaging, signal transduction, drug discovery</td>
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<td>Secretion Biology</td>
<td>Seiji Torii (Associate Professor) Ext. 8859 <a href="mailto:storii@gunma-u.ac.jp">storii@gunma-u.ac.jp</a></td>
<td>With the decrease of neuroendocrine function, a variety of diseases increase, which include metabolic syndrome and neuronal disorders. To understand fundamental mechanisms on such human diseases, we investigate the biosynthesis and secretion of peptide hormones, and the regulation of cell survival and death, with use of molecular and cellular technical approaches. In a collaborative study with some engineering researchers, we are also developing fluorescent or luminescent probes for analyzing cancer, diabetes, and ischemia. <strong>Keywords</strong> peptide hormones, insulin, fluorescent probes, molecular imaging, tumor cells, cell death</td>
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<td>Molecular Membrane Biology</td>
<td>Miyuki Sato (Associate Professor) Ext. 8843 <a href="mailto:m-sato@gunma-u.ac.jp">m-sato@gunma-u.ac.jp</a></td>
<td>Eukaryotic cells are composed of several membrane-bound organelles. The shape and composition of organelles are dynamically regulated during cell differentiation and are also influenced by the extracellular environment. We are interested in the regulation of organelle dynamics during animal development and use C. elegans as a model system. In particular, we explore the mechanisms and physiological roles of autophagy and endocytosis in fertilized eggs by using genetic and cell biological approaches. <strong>Keywords</strong> C. elegans, embryonic development, organelle, autophagy, endocytosis</td>
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<td>Molecular Endocrinology and Metabolism</td>
<td>Tetsuro Izumi Ext. 8856 <a href="mailto:tizumi@gunma-u.ac.jp">tizumi@gunma-u.ac.jp</a></td>
<td>To understand the physiopathology of multicellular organisms, it is important to know how differentiated cells communicate with each other to regulate their function as a whole body. We especially focus on the basic biology of pancreatic beta cells, adipocytes, and immune cells, because of their involvement in the pathogenesis of endocrine, metabolic, and allergic diseases such as diabetes, obesity, and asthma. We approach these themes at multiple levels from molecules to whole body, and by using varying techniques of molecular biology, biochemistry, cell biology, and genetics. <strong>Keywords</strong> genetically modified mouse, regulated exocytosis, endocrine, metabolic, and allergic disease, live cell imaging, cell sorting</td>
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<td>Developmental Biology and Metabolism</td>
<td>Yoshi Fujitani Ext. 8855 <a href="mailto:fujitani@gunma-u.ac.jp">fujitani@gunma-u.ac.jp</a></td>
<td>The dysfunction of pancreatic cells or brown adipocytes can cause diabetes and metabolic syndrome. We aim to elucidate the mechanism involved in the maintenance of homeostasis in these higher-order function cells, which is the key to glucose metabolism, from a variety of viewpoints, including developmental biology, molecular biology, and physiology. Recent studies have indicated that zinc not only plays a crucial role in the maintenance of protein structure, but is also involved in intracellular and extracellular signal transduction. Our second aim is to clarify the role of zinc signaling in diabetes and obesity. <strong>[Keywords]</strong> Pancreatic β cell, development, autophagy, brown adipocyte, zinc biology, glucose metabolism</td>
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<td></td>
<td>Metabolic Signaling</td>
<td>Tadahiro Kitamura Ext. 8845 <a href="mailto:kitamura@gunma-u.ac.jp">kitamura@gunma-u.ac.jp</a></td>
<td>In this laboratory, we are trying to elucidate the molecular mechanism by which metabolic syndrome occurs, using genetically manipulated animal models, such as knockout mice or transgenic mice. We hope that our research will contribute to the development of new strategies to treat or prevent diabetes and obesity. <strong>[Keywords]</strong> diabetes, obesity, metabolic syndrome, transcription factor, knockout mouse, insulin, glucagon</td>
</tr>
<tr>
<td></td>
<td>Laboratory of Epigenetics and Metabolism</td>
<td>Takeshi Inagaki Ext : 8835 <a href="mailto:inagaki@gunma-u.ac.jp">inagaki@gunma-u.ac.jp</a></td>
<td>Epigenetic regulation of gene expression is independent of genomic sequence and therefore can flexibly respond to environmental factors. We are currently investigating various epigenetic mechanisms by which the environmental factors are linked to metabolic diseases. Main focus of our research is histone modification which regulates gene expression through changing chromatin structure and cofactor recruitment. Using techniques of transcriptomics, epigenetics, proteomics and animal models, we intend to elucidate the detail mechanisms of epigenetic regulations of energy metabolism and adipose cell development. <strong>[Keywords]</strong> Epigenome, metabolic diseases, energy metabolism, transcription, chromatin structure</td>
</tr>
<tr>
<td></td>
<td>Molecular Genetics</td>
<td>Takayuki Yamashita Ext. 8830 <a href="mailto:y-taka@gunma-u.ac.jp">y-taka@gunma-u.ac.jp</a></td>
<td>A wide variety of intrinsic and environmental stresses induce cellular senescence, apoptosis and genomic instability. These “stress responses” underlie the pathogenesis of aging-related diseases and tumor development. Specifically, we aim to clarify (i) the molecular mechanisms of oncogene-induced DNA replication stress in genomic instability and (ii) the regulatory role of HSF1, a master transcription factor of the heat shock response, in cellular senescence. <strong>[Keywords]</strong> DNA replication stress, genomic instability, carcinogenesis, heat shock transcription factor 1, cellular senescence</td>
</tr>
<tr>
<td></td>
<td>Genome Sciences</td>
<td>Izuho Hatada Ext. 8057 <a href="mailto:hatada@gunma-u.ac.jp">hatada@gunma-u.ac.jp</a></td>
<td>Epigenetics is the study of heritable codes other than genetic codes written in A,G,C, and T. Monozygotic twins have the same genetic information; however, they have different epigenetic information and phenotype. DNA methylation and histone modifications (acylation and methylation) serve as epigenetic code. Epigenetic status, namely, epigenome, is thought to be influenced by the environment, such as food, infection, and chemicals. This reprogramming of the epigenome by the environment could cause diseases such as cancer, and diabetes. We are going to clarify the role of epigenetic anomalies in diseases such as cancer, diabetes and obesity. <strong>[Keywords]</strong> epigenetics, epigenome, DNA methylation, microarray, genome-wide analysis</td>
</tr>
<tr>
<td>Region</td>
<td>Major Field</td>
<td>Contact Information</td>
<td>Main contents of research and key words</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td>---------------------</td>
<td>----------------------------------------</td>
</tr>
</tbody>
</table>
| Laboratory of Integrated Signaling Systems | Tohru Ishitani  Ext. 8892  ishitani@gunma-u.ac.jp | Morphogen signaling systems, such as Wnt signaling, plays crucial roles in animal tissue morphogenesis and homeostasis, and dysregulation of morphogen signaling causes a variety of diseases, including cancer, metabolic diseases, and neurological diseases. Our laboratory investigates the regulatory mechanisms of morphogen signaling systems and also searches for unknown signaling systems that regulate tissue morphogenesis and homeostasis, using in vivo imaging, biochemistry, and molecular genetics. Especially, we are now focusing on “cell competition”, a new system supporting animal tissue homeostasis.  
**[Keywords]** signal transduction, morphogen, cell competition, in vivo imaging, disease model | |
| Medical Physics and Biology for Ion Therapy | Masami Torikoshi  Ext. 8378  torikosi@gunma-u.ac.jp  Akihisa Takahashi  Ext. 7917  a-takahashi@gunma-u.ac.jp | In this course, we aim to nurture researchers in the field of medical physics who are indispensable for ensuring the reliability of radiotherapy through sophisticated research and credible study of heavy ion and x-ray radiotherapies. To improve radiotherapy and to use space environment we carry out *in vitro* and *in vivo* experiments regarding a variety of radiation-induced biological phenomena. Another important purpose of this course is to increase the expertise of those radiobiology specialists involved in radiotherapy and space science.  
**[Keywords]** Radiotherapy, heavy ion radiotherapy, medical physics, accelerator, radiation biology, effect of space radiation | |
| Heavy Ion Clinical Medicine | Tatsuya Ohno  Ext. 8378  tohno@gunma-u.ac.jp | Heavy ion radiotherapy for malignant tumors has several biophysical advantages compared with photon therapy. Heavy ion clinical medicine includes radiobiology, medical physics and engineering, tumor pathology, clinical oncology, and radiation diagnosis. This course is implemented to understand that the radiation oncology including heavy ion radiotherapy is comprehensive medical science which integrates and systematizes these wide varieties of scientific subfields to attain successful cancer treatment.  
**[Keywords]** heavy ion radiotherapy, multimodality cancer therapy, biological response, high LET, hypofractionation, Image-guided adaptive radiotherapy | |
| Quantum Biology | Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology  Yasuyuki Ishii  Yashikko Kobayashi  Tomoo Funayama | We are researching biological functions at the molecular, cellular and tissue levels using the physical and biological effects of ion beams at the ion beam irradiation facility of Takasaki Advanced Radiation Research Institute. Our final goal is the development of new methods of analyzing biological function not possible with previously established methods. The major subjects are as follows:  
· Making advances in micro-PXIE (Particle Induced X-ray Emission) analysis.  
· Developing a technology to target and hit a cell or a tissue with a single-heavy-ion of several hundred MeV within 1 μ in spatial accuracy under microscope observation. Elucidating effects induced to normal or cancer human cells irradiated with heavy ions, and to those not irradiated (bystander effect).  
**[Keywords]** ion beam, microbeam, micro-PXIE, single-ion hit, irradiation of targeted cell, radiomicrosurgery, bystander effect | |
出願関係書類様式
Application-Related Forms

◆ 入学願書・履歴書
Application Form and Curriculum Vitae

◆ 志願理由書
Statement of Purpose

◆ 検定料振込用紙
Examination Fee Transfer Forms

◆ 振込金受付証明書・
検定料収納証明書貼付台紙
Sheet for Certificate of Transfer Receipt,
Certificate of Payment

◆ 写真票・受験票
Photograph Card, Examination Card

◆ 受験承諾書（該当者のみ）
Written approval for taking examination
（only a person concerned）

◆ 宛名票
Name and Address Card

◆ 入学資格審査申請書（該当者のみ）
Application for the screening for admission requirements
（only a person concerned）

◆ 研究歴証明書（該当者のみ）
Certificate of Research Activities
（only a person concerned）

※本様式は本学大学院医学系研究科・医学部ホームページ（http://www.med.gunma-u.ac.jp/）に掲載しております。
必要な方はこちらも御利用ください。

※The above forms are posted on the website of Graduate School of Medicine/School of Medicine, Faculty of Medicine, Gunma University (http://www.med.gunma-u.ac.jp/). If you need them, please use the website as well.
平成30年度群馬大学大学院医学系研究科生命医科学専攻（修士課程）
入 学 願 書（第2次）

2018 Course of Biomedical Sciences in Graduate School of Medicine, Gunma University (Master’s Program)
Application Form (Secondary)

<table>
<thead>
<tr>
<th>受験番号</th>
<th>Examinee’s Number</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>フリガナ</td>
<td>Name</td>
<td>*</td>
</tr>
<tr>
<td>氏名</td>
<td>Name</td>
<td>*</td>
</tr>
<tr>
<td>生年月日</td>
<td>Birth Date (西暦)</td>
<td>年</td>
</tr>
<tr>
<td>志望する領域及び専攻分野</td>
<td>Desired Region and Major Field</td>
<td>領域</td>
</tr>
<tr>
<td>国籍</td>
<td>Nationality</td>
<td>*</td>
</tr>
<tr>
<td>現住所</td>
<td>Current Address</td>
<td>*</td>
</tr>
<tr>
<td>University etc., graduated</td>
<td>University etc., graduated</td>
<td>私立</td>
</tr>
<tr>
<td>出身大学又は学位取得年月日等</td>
<td>Name of the university</td>
<td>年</td>
</tr>
<tr>
<td>出身大学等に係る教育機関名</td>
<td>Name of the university</td>
<td>年</td>
</tr>
<tr>
<td>学位授予機関</td>
<td>Degree-Granting Institution</td>
<td>年</td>
</tr>
<tr>
<td>本人以外の入試に関する関連先（家族等）</td>
<td>Name of the family address</td>
<td>*</td>
</tr>
<tr>
<td>氏名</td>
<td>Name</td>
<td>*</td>
</tr>
<tr>
<td>現住所</td>
<td>Current Address</td>
<td>*</td>
</tr>
</tbody>
</table>

履歴 事 項
Personal History

<table>
<thead>
<tr>
<th>学歴</th>
<th>Educational Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>年</td>
<td>Year</td>
</tr>
<tr>
<td>月</td>
<td>Month</td>
</tr>
<tr>
<td>日入学</td>
<td>Day (Admission)</td>
</tr>
<tr>
<td>年</td>
<td>Year</td>
</tr>
<tr>
<td>月</td>
<td>Month</td>
</tr>
<tr>
<td>日卒業</td>
<td>Day (Graduation)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>職歴</th>
<th>Professional Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>年</td>
<td>Year</td>
</tr>
<tr>
<td>月</td>
<td>Month</td>
</tr>
<tr>
<td>日</td>
<td>Day</td>
</tr>
</tbody>
</table>

[記入上の注意]
1. 必要事項は、青又は黒のボールペンを用いて楷書で正確に記入してください。
2. 有者がいる方は、履歴欄に勤務先及び職業を詳細に記入してください。
3. 現住所は、通知・連絡等を確実に受けとることができる場所を記入してください。
4. ※欄は記入しないでください。
5. 学歴欄には、学士号等の履歴も記入してください。
6. 志望する専攻分野の第一志望は、必ず記入してください。

【Notes on filling in】
1. Fill in the above application form in the block style and accurately by using a blue or black ball-point pen.
2. Fill in your working place and occupation minutely if you are a working person.
3. Fill in the current address where notice and inquiry, etc. can be received without fail.
4. Do not fill in the "＊" mark.
5. Fill in the "Educational Background box" with your background such as research student, postgraduate student, etc.
6. Write your first choice in the Desired Major Field.

(1/2)
履歴書（Curriculum Vitae）

Educational background

<table>
<thead>
<tr>
<th>Name and Address of School</th>
<th>Year and Month of Entrance and Completion</th>
<th>Duration of Attendances</th>
<th>Diploma or Degree awarded, Major Subject, Skipped years/levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Secondary School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Secondary School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Level</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total number of years of the aforementioned schooling (以上を通算した全学校教育修学年数) As of April 1, 2018 (2018年4月1日現在)

Employment History (Begin with the most recent employment history, if applicable.)

<table>
<thead>
<tr>
<th>Name and Address of Employer</th>
<th>Period of Employment</th>
<th>Position</th>
<th>Type of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>From</td>
<td>To</td>
<td></td>
</tr>
</tbody>
</table>

*If the blanks above have not sufficient space to be filled in, write on another appropriate sheet and attach it. (注）上欄に書き切れない場合には、適当な別紙に記入して添付すること。*

Notes:
1. Kindergarten education and nursery school education are not included. (幼稚園・保育所教育は含まれない。)
2. So-called “daigaku-yobi-kyoiku (preparatory education for university admission)” is included in upper secondary school. (いわゆる「大学予備教育」は中等教育に含まれる。)
3. If the applicant has passed the university entrance qualification examination, fill in that effect in *-1 column. (大学入試資格試験に合格している場合には、その旨を* -1欄に記入すること。)
4. If the so-called “grade-skipping” has been carried out, write that effect in the applicable column, “Diploma or Degree awarded, Major Subject, Skipped years/levels”. (いわゆる「飛飛び」をしている場合には、その旨を該当する教育課程の「学位・資格、専門科目、飛び級の状況」欄に記載すること。

日付（Date） 出願者名前（Name）

出願者署名（Signature）
Statement of Purpose (Secondary)

2018 Course of Biomedical Sciences in Graduate School of Medicine, Gunma University (Master’s Program)

Examinee’s Number

Do not fill in the "※ box."
平成30年度群馬大学大学院医学系研究科
生命医科学専攻（修士課程）検料封入用紙（第2次）

注意事項
① 振込は、下記の専用の検料封入用紙を使用し、最寄りの金融機関の窓口から
電信扱いで振込んでください（ゆうちょ銀行からは振込できません）。
ATM（現金自動預入機）、携帯電話及びパソコン等からは振込できません。
② 太枠の中をボールペンで御記入ください（鉛筆書きのものは不可）。
③ 振込手数料は振込人負担となります。
④ 添付用（大学提出用）の「振込金受付証明書」に金融機関出納印が押印されていることを確認し、
添付用証明書・検料封入証明書貼付台紙に貼付し出願書類に同封してください。
⑤ 振込金受取者は本人の控えとして、大切に保管しておいてください。

添付用（大学提出用）
添付用大学提出用証明書
群馬大学
5302

2018 Course of Biomedical Sciences in Graduate School of Medicine,
Gunma University (Master’s Program) Examination Fee Transfer Forms (Secondary)

Notes:
① The payment must be made at a teller’s window of your nearest bank as wire transfer
using the below Examination Fee Transfer Forms issued by our University (the payment
cannot be made at post office). You are not supposed to make the payment by using ATM
(automatic teller machine), cell phone, or the Internet.
② Fill out the thick-bordered boxes by using a ball-point pen. (The forms written in pencil
are unacceptable.)
③ A bank transfer fee will be borne by a person who pays the fee.
④ Confirm that the “Certificate of Transfer Receipt” provided (for being submitted to
University) is sealed by financial institution and paste it on the “Sheet for Certificate of
Transfer Receipt” and be sure to enclose it with the admission documents.
⑤ Make sure you keep the transfer receipt as your own duplicate with good care.
平成30年度群馬大学大学院医学系研究科生命医科学専攻（修士課程）
振込金受付証明書・検定料収納証明書貼付台紙（第2次）

1．金融機関からの支払い

『振込金受付証明書』
貼付欄

ここに貼付する

2．コンビニエンスストアでの支払い

『検定料収納証明書』
貼付欄

☐ 出願時において国費外国人留学生（日本政府）である者
（該当者は○をつけてください。検定料は不要です。）

☐ 東日本大震災及び風水害等の災害罹災者である者（検定料免除申請者）
（該当者は○をつけてください。検定料は不要です。）

◆次のいずれかの方法により支払ってください。
1．金融機関（ゆうちょ銀行を除く）からの支払い
   (1) 本募集要項に添付してある検定料振込用紙（様式３）により、所定の金額を必ず金融機関窓口から振り込み、「振込金受付証明書（大学提出用）」を受領してください。なお、振込手数料は振込人の負担となりますので、留意してください。
   (2) 「振込金受付証明書（大学提出用）」を本台紙の所定の欄に貼り付けてください。
   (3) 振込金受領者は本人の捺印として、大切に保管してください。
   (4) 振込手数料は支払人の負担となりますので、留意してください。
   (5) 金融機関出納印のないもの、金額を訂正したもの及び鉛筆書きのものは無効になります。また、ATM（現金自動預払機）、携帯電話、パソコン等からは、振り込まないでください。

2．コンビニエンスストアでの支払い（パソコンやスマートフォン等のある環境で御利用ください）
   (1) 15頁「コンビニエンスストア・クレジットカードでの検定料支払方法」を参照の上、支払ってください。
   (2) 支払後、レジにて受け取った「入試検定料・選考料 取扱説明書」の「取扱説明書」部分を切り取り、本台紙の所定の欄に貼り付けてください。
   (3) 支払期間 平成29年12月11日（月）から12月27日（水）15時まで（「Webサイトでの申込み」は、支払期間終了30分前まで）

3．クレジットカードでの支払い（パソコンやスマートフォン等、プリンタのある環境で御利用ください）
   (1) 15頁「コンビニエンスストア・クレジットカードでの検定料支払方法」を参照の上、支払ってください。
   (2) 支払後、「入試検定料・選考料 取扱説明書」を印刷し、「取扱説明書」部分を切り取り、本台紙の所定の欄に貼り付けてください。
   (3) 支払期間 平成29年12月11日（月）から12月27日（水）15時まで

※英文は裏面を御覧ください
English reference, please turn over.
2018 Course of Biomedical Sciences in Graduate School of Medicine, Gunma University (Master’s Program)
Sheet for Certificate of Transfer Receipt (Secondary)

1. Payment at bank

Certificate of Transfer Receipt

Please paste “Certificate of payment” here.

2. Payment at Convenience Store

Certificate of Payment

Please paste “Certificate of Payment” above.

If you are receiving the Japanese Government (MEXT) Scholarship at the time of application, the examination fee payment is not required. Please submit the document certifying that you are the recipient of the scholarship.

☐ I am receiving the Japanese Government (MEXT) Scholarship at the time of application. (Fill in a circle in the square. The recipient of the scholarship doesn’t have to pay the examination fee.)

☐ I am the sufferer from Great East Japan earthquake and applying for exemption of the examination fee. (Fill in a circle in the square. The applicant doesn’t have to pay the examination fee.)

3. Payment by Credit card

Please select one from the following four payment methods.

1. Payment at a bank in Japan (the payment cannot be made at post office).
   (1) The examination fee transfer form [Form 3] provided must be used and the payment should be made at a teller’s window of your nearest bank. Bank transfer fees are chargeable on the person who pays the fees.
   (2) Confirm that the "Certificate of Transfer Receipt" is sealed by the bank (financial institution) and paste it on the prescribed place in the "Sheet for Certificate of Transfer Receipt".
   (3) The transfer payment receipt should be kept with good care as your own duplicate.
   (4) Transfer payment period: December 11 (Mon.) to 3:00 p.m. (Japan time) of December 27 (Wed.), 2017.
   (5) We do not accept the "Certificate of Transfer Receipt" without a seal by financial institution, one with the amended amount of money, or one written with a pencil. Payment by using ATM (Automated Teller Machine), cell phone or personal computer should not be made.

2. Payment at a convenience store (make sure that you have a personal computer or cell phone with you).
   (1) Refer to the page 41 when you pay at a convenience store. Payment commissions are chargeable on the person who pays the fees.
   (2) After payment, receive the "Application Fee Statement", detach the "Certificate of Payment" (receipt) portion from it, and paste it on the prescribed place in the "Sheet for Certificate of Transfer Receipt" [Form 4].
   (3) Payment period: December 11 (Mon.) to 3:00 p.m. (Japan time) of December 27 (Wed.), 2017. When you make payment via the web site, you have to pay 30 minutes before the end of payment period.

3. Payment by credit card (make sure that you have a personal computer or cell phone connected to a printer with A4 paper with you).
   (1) Refer to the page 41 when you pay by credit card. Payment commissions are chargeable on the person who pays the fees.
   (2) After payment, print the "Application Fee Statement", detach the "Certificate of Payment" (receipt) portion from it, and paste it on the prescribed place in the "Sheet for Certificate of Transfer Receipt".
   (3) Payment period: December 11 (Mon.) to 3:00 p.m. (Japan time) of December 27 (Wed.), 2017.
<table>
<thead>
<tr>
<th>受験番号</th>
<th>Examinee’s Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>フリガナ</td>
<td>Name</td>
</tr>
<tr>
<td>氏名</td>
<td>Name</td>
</tr>
<tr>
<td>志望領域</td>
<td>Desired Region</td>
</tr>
<tr>
<td>志望専攻分野</td>
<td>Desired Major Field</td>
</tr>
<tr>
<td>第一志望</td>
<td>The first choice</td>
</tr>
<tr>
<td>第二志望</td>
<td>The second choice</td>
</tr>
</tbody>
</table>

写真 Photograph
- 受験の約6か月前に撮ってください。
- フチ4cm、ヨチ3cm。
- 写真を無作為に使用するため、顔を一様に撮影してください。
- 受験者名を顔に記入してください。
- 3ヶ月以内に撮影したものを。
- フチ4cm、ヨチ3cm。

Notes when filling in the cards
1. 必ず受験番号を記入してください。
2. 受験者は、試験開始30分前（9時30分）までに試験室に集合してください。
3. 試験室では受験番号と同じ番号の着用してください。
4. 試験開始後30分以内の遅刻は認めますが、試験時間の延長は認めません。
5. その他、受験に関する細部の注意事項は、試験室において指示します。

Notes when taking the examination
1. Examinee must carry his/her examination card.
2. Examinees must assemble in the examination room by up to 30 minutes before the start of the examination.
3. In the examination room, sit at the seat which your examinee’s number is posted on and place your examination card on the top right corner of the desk.
4. Lateness within 30 minutes after the start of the examination will be accepted, but the test time shall not be extended.
5. Other detailed notes about the examination will be directed at the examination room.
受験承諾書
Written approval for taking examination

氏名（Name）

生年月日（Birth Date）

職名（Official Title）

上記の者が、平成30年度群馬大学大学院医学系研究科生命医科学研究専攻（修士課程）の入学試験を受験することを承諾します。

I approve of the above person’s taking the entrance examination for entry into Course of Biomedical Sciences in Graduate School of Medicine, Gunma University (Master’s Program) in 2018.

年 月 日
Year Month Day

群馬大学長 殿
To President of Gunma University

所属機関
Institution the Examinee Belongs to

所在地
Address of the Institution

電話番号
Telephone Number
宛名票
Name and Address Card

◎ 志願者は本票を学生募集要項記載の出願書類と一緒に必ず提出してください。
◎ 槊書で丁寧に記入してください。
◎ 切りとり線で切り離して、そのまま提出してください。
（ホームページから用紙を入手した方は、そのまま記入してください。）
入試に関する確実な受信場所を記入してください。
場所がアパート、団地等の場合は「様方」の欄にアパート、団地名等記入してください。
※欄は記入しないでください。
◎ Applicant must submit this card with the application documents mentioned in the Admission Guidelines.
◎ Fill in this card neatly and in the block style.
◎ Detach the sheet on the perforated line and submit it.
(If you obtained the form from the homepage, fill in it.)
Fill in the place for receiving information about entrance examination without fail.
If the above place indicates a flat or a housing complex, etc., fill in the name of a flat or a housing complex, etc. in the “c/o box”.
Do not fill in the “※box.”

受験番号 Examinee’s Number
※

左欄に、郵便番号、住所、氏名を記入してください。
Fill in postal code, current address and name in the left column.

Mr. / Ms.

受験番号 Examinee’s Number
※

左欄に、郵便番号、住所、氏名を記入してください。
Fill in postal code, current address and name in the left column.

Mr. / Ms.
私は、平成30年度群馬大学大学院医学系研究科生徒医科学研究専攻（修士課程）入学試験に合格したので、下記により入学資格審査をお願いします。

記
1 該当する入学資格審査
次のいずれかに該当するかについて、当該項目の番号を○で囲んでください。
(1) 学校教育法（昭和22年法律第26号）第102条第1項の規定により本大学院以外の大学院に入学した者であって、本大学院において、大学院における教育を受けるにふさわしい学力がある者
(2) 本大学院において、個別の入学資格審査により、大学を卒業した者と同じ以上の学力がある者で、平成20年3月31日までに22歳未満のもの

2 希望する専攻分野名
第1志望（ ）
第2志望（ ）

3 記述文書
本申請書に添付した文書の番号を○で囲んでください。
(1) 上記1の該当者
ア 成績証明書（出身大学（学部）の成績証明書と当該大学の教育課程が明記されている文書（履修手引等を併せて提出のこと）
イ 在学証明書（在学中の大学院の在籍を証明したもので、入学月日および在籍するもの。なお、大学院を修了又は退学している者は、入学月日及び在籍期間を証明する文書（出身大学の成績証明書等を提出のこと）
ウ 研究業績がある場合は、その業績（論文等）
エ その他の書類（ ）

(2) 上記2の該当者
ア 研究業績証明書（本要項添附の用紙（様式10）によります。）
イ 研究業績又はその他顕著な業績がある場合に、その業績（論文等）
ウ 最終学校（短期大学、専修学校又は各種学校等）の卒業又は修了証明書
エ 最終学校（短期大学、専修学校又は各種学校等）の成績証明書
オ その他の書類（ ）

裏面の履歴書も記入すること

I wish to take the entrance examination for entry into Course of Biomedical Sciences in Graduate School of Medicine, Gunma University in 2018 and request the screening of admission requirements under the following conditions.

1. The screening of admission requirements that fall under the applicable number.
   Circle the applicable number of the items described below.

   (1) A person who entered a graduate school other than our Graduate School based on the provisions of Article 102-2 of the School Education Act (Act No. 26 of 1947) and who has been recognized by our Graduate School as having academic abilities appropriate for receiving graduate school education,
   (2) A person who has graduated from our Graduate School as having academic abilities equivalent or superior to a person who has graduated a university based on the results of individual examination of the applicant's qualifications, and who will be 22 years of age by March 31, 2018.

2. Desired Major Field
   First choice（ ）
   Second choice（ ）

3. Attached documents
   Circle the number of the document attached to this application.

   (1) Applicant who falls under the above(1)
      a. Academic transcript (faculty results and the document showing the curriculum of the faculty (e.g. syllabus))
      b. Certificate of student status issued by the president of the university (graduate school) you are in and with the date of your entrance. If you completed or quit the graduate school, submit the document with the date of your entrance (e.g. the transcript from the graduate school).
      c. Published academic papers etc. on research achievements, if any.
      d. Other documents（ ）

   (2) Applicant who falls under the above(2)
      a. Certificate of Research Activities (The form attached to our admission guidelines must be used. [form-10])
      b. Published academic papers etc. on research achievements or other remarkable achievements, if any.
      c. Graduation Certificate or Completion Certificate issued by the final educational institution (including a junior college, an advanced vocational school or a vocational school, etc.) from which the applicant graduated.
      d. Academic transcript issued by the final educational institution (including a junior college, an advanced vocational school or a vocational school, etc.) from which the applicant graduated.
      e. Other documents（ ）

The curriculum vitae on the reverse side shall also be filled in.
### Educational background

<table>
<thead>
<tr>
<th>Name and Address of School (学校名及び所在地)</th>
<th>Year and Month of Entrance and Completion (入学及び卒業年月)</th>
<th>Duration of Attendances (修学年数)</th>
<th>Diploma or Degree awarded, Major Subject, Skipped years/levels (学位・資格、専門科目、飛び級の状況)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Education (初等教育)</td>
<td></td>
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<tr>
<td>Elementary School (小学校)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name (学校名)</td>
<td>From (入学)</td>
<td>To (卒業)</td>
<td>Years (年) and months (月)</td>
</tr>
<tr>
<td>Address (所在地)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Education (中等教育)</td>
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<td></td>
</tr>
<tr>
<td>Lower Secondary School (中学)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name (学校名)</td>
<td>From (入学)</td>
<td>To (卒業)</td>
<td>Years (年) and months (月)</td>
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<td>Address (所在地)</td>
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<tr>
<td>Upper Secondary School (高校)</td>
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<td></td>
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</tr>
<tr>
<td>Name (学校名)</td>
<td>From (入学)</td>
<td>To (卒業)</td>
<td>Years (年) and months (月)</td>
</tr>
<tr>
<td>Address (所在地)</td>
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<tr>
<td>Higher Education (高等教育)</td>
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<tr>
<td>Undergraduate Level (大学)</td>
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<tr>
<td>Name (学校名)</td>
<td>From (入学)</td>
<td>To (卒業)</td>
<td>Years (年) and months (月)</td>
</tr>
<tr>
<td>Address (所在地)</td>
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<td></td>
</tr>
<tr>
<td>Graduate Level (大学院)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Name (学校名)</td>
<td>From (入学)</td>
<td>To (卒業)</td>
<td>Years (年) and months (月)</td>
</tr>
<tr>
<td>Address (所在地)</td>
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</tbody>
</table>

Total number of years of the aforementioned schooling (以上を通算した全学校教育修学年数)  
As of April 1, 2018 (2018年4月1日現在)

---

### Employment History (Begin with the most recent employment history, if applicable.)

<table>
<thead>
<tr>
<th>Name and Address of Employer (勤務先及び所在地)</th>
<th>Period of Employment (在職期間)</th>
<th>Position (役職名)</th>
<th>Type of Work (職務内容)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>From</td>
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<td>To</td>
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<td></td>
</tr>
</tbody>
</table>

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*If the blanks above have not sufficient space to be filled in, write on another appropriate sheet and attach it.*  
(注)上欄に書き切れない場合には、適当な別紙に記入して添付すること。

---

Notes:  
1. Kindergarten education and nursery school education are not included. (幼稚園・保育所教育は含まれない。)  
2. So-called "daigaku-yobi-kyoiku (preparatory education for university admission)" is included in upper secondary school. (いわゆる【大学予備教育】は中等教育に含まれる。)  
3. If the applicant has passed the university entrance qualification examination, fill in that effect in *-1 column. (大学入学資格試験に合格している場合には、その旨を*1欄に記入すること。)  
4. If the so-called "grade-skipping" has been carried out, write that effect in the applicable column, "Diploma or Degree awarded, Major Subject, Skipped years/levels". (例えば「飛び級」をしている場合には、その旨を該当する教育課程の「学位・資格、専門科目、飛び級の状況」欄に記載すること。)  

日付 (Date) **出願者名前 (Name)**  
出願者署名 (Signature)
Certificate of Research Activities

<table>
<thead>
<tr>
<th>Nationality (国籍)</th>
<th>Name (氏名)</th>
<th>Birth Date (生年月日)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

This is to certify that the above person has research history as follows.

<table>
<thead>
<tr>
<th>Title of Position (職名)</th>
<th>Name (氏名)</th>
<th>Address of Institution (住所)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Institution (機関名) (Institution and division for which he/she worked and his/her then status) (機関名 (Institution and division for which he/she worked and his/her then status))

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Day</th>
<th>Year</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

From: ___________ to: ___________ = ( _______ )

(Day) (Month) (Year) (Day) (Month) (Year) (Year) (Month)

Note: A certifier shall be a head (e.g., President, Dean, or Director, etc.) of an organization. However, in the case of certifying a research history of our university graduate (including a student enrolled in our university), a supervisor may also serve as a certifier.

Date: ___________
平成30年度
2018

大学院医学系研究科生命医科学専攻
（修士課程）
Course of Biomedical Sciences in Graduate School of Medicine
（Master’s Program）

第2次 学 生 募 集 要 項
Secondary Admission Guidelines

周囲は群馬県の象徴である名勝赤城、榛名、妙義の
上毛三山を浮き彫りに大学を囲み、群馬大学の象
徴となっています。

The above design of "大學 (kanji for university, called
"daigaku")" surrounded by the famous picturesque view
of three carved mountains which comprise Mt. Akagi, Mt.
Haruna, and Mt. Myogi and are called JOMO SANZAN
symbolizing Gunma Prefecture is the emblem of Gunma
University.