



SUMMER SCHOOLS

UNIVERSITY OF
ANGERS-**FRANCE**

*Share your knowledge with
international researchers and
students from different countries
and cultures.*

Research - Cancer - Ethics
Bioinformatics - Plant science
Mitochondrial medicine

www.summerschools.univ-angers.fr

ANGERS

SUMMER SCHOOLS ANGERS 2015 | ÉCOLES D'ÉTÉ 2015

Angers is the historical, political and economic capital of Anjou, located in western France, in the Loire Valley, which is a UNESCO World Heritage Site famous for its wines and castles. Angers has a unique 12th century fortress which overlooks the River Maine and the world's largest medieval tapestry.

Regularly acknowledged in the national press as one of the leading cities in France for its quality of life and respect for the environment, Angers has now received the first award as "the greenest city in France".

With more than 30,000 students every year, in an urban area of 250,000, Angers offers a very dynamic lifestyle with frequent cultural events and festivals all year round. The city is a major centre for higher education and research. The University of Angers Medical School is close to the University Hospital Centre (CHU) and to the INSERM and CNRS national research laboratories.

Scientific program of the Summer Schools

During these summer schools the students will be exposed to research methods in different medical/scientific fields.

They will have the opportunity to meet international researchers and interact with international students in an intercultural and interdisciplinary context.

The 55-hour programs include lectures by international researchers (max. one hour) followed by questions and discussion, workshops with small groups of students, visits to research institutions and, oral presentations on selected topics. Come to Angers and discover a new field in a motivating environment.



Capitale historique, politique et économique de l'Anjou, la ville d'Angers est localisée dans l'Ouest de la France, à proximité de la vallée de la Loire, classée au patrimoine mondial de l'Unesco et réputée pour ses nombreux vins et châteaux. La ville dispose d'une forteresse unique datant du 12^e siècle avec vue sur la Maine, et de la plus grande tapisserie médiévale du monde.

Régulièrement saluée par la presse nationale pour sa qualité et son cadre de vie, Angers arrive désormais en tête du palmarès des « villes les plus vertes de France ».

Avec plus de 30 000 étudiants chaque année, Angers offre un cadre de vie dynamique et propose de fréquents événements culturels au cours de l'année.

La ville dispose d'un important pôle universitaire et de recherche, avec de nombreux centres de recherche spécialisés de renom.

La Faculté de Médecine se situe à proximité du Centre hospitalier universitaire (CHU), de l'INSERM et des laboratoires du CNRS.

Programme scientifique des écoles d'été

Dans le cadre des écoles d'été, les étudiants sont exposés à des méthodes de recherche dans différents domaines scientifiques et médicaux. Ils ont l'opportunité de rencontrer des chercheurs internationaux et interagir avec des étudiants européens dans un contexte interculturel et interdisciplinaire.

Les 55h de programme incluent des cours dispensés par des chercheurs internationaux (maximum 1h) suivis de questions et débats, des workshops organisés en petits groupes d'étudiants, des visites de laboratoires de recherche et, pour certains, des présentations orales sur des thèmes précis.

Le but de ces programmes est principalement de faire bénéficier aux étudiants de cours pratiques et interactifs.



RESEARCH

SUMMER SCHOOLS ANGERS 2015

6th Edition 29th June – 10th July 2015 Faculty of Medicine University of Angers



Presentation:

This program will show students the links between fundamental sciences and clinical research. The purpose is to give them the opportunity to be exposed to medical research, in an academic medical environment and to facilitate their accession to advanced course degrees such as MD or Pharmacy/PhD programs.

Workshops:

Visits of international research institutes will be organized during the stay such as Oniris in Nantes and Généthon in Paris. The aim of this program is mainly to give practical and interactive classes to students. Several workshops are therefore organized, belong them:

- workshop on "Academic research/Industrial research" (with companies from Atlanpole Biotherapies),
- workshop on "Medical Informatics"
- workshop on "Experimental surgery" at the simulation center.

Sessions:

Plenary conference by Professor Gareth Williams.

Session 1: Brain connectivity

Session 2: Fetal programming

Session 3: Nanomedicine

Session 4: Immunology

Session 5: Experimental surgery

Session 6: Medical Informatics

Session 7: Gene therapy

Session 8: From animal experiment to human medicine

Session 9: Metabolism and cancer

Session 10: Neurogeriatry

Session 11: From physiology to integrative spatial medicine

Criteria:

The program is open to undergraduate students from 2nd to 4th year (medicine or pre-med curricula or midwifery).

Invited speakers:

- G. Williams, Bristol, UK
- S. Groeschel, Tübingen, DE
- S. Ozanne, Cambridge, UK
- T. Austin, Cambridge, UK
- K. Katti, Columbia university, USA
- P. Amé-Thomas, Rennes, FR
- F. Petak and J Tolnai, Szeged, HU
- C. André, Rennes, FR
- JB. Dupont, Nantes, FR
- P. Radermacher, Ulm, DE
- M. Haigis, Harvard, USA

CANCER

SUMMER SCHOOLS ANGERS 2015

■ 3rd Edition 29th June – 10th July 2015

Faculty of Medicine
University of Angers



■ **Presentation:**

This program will give students an overview of cancer from bench to bedside. The purpose of this summer school is to give students an innovative and multidisciplinary insight into cancer and to facilitate their accession to advanced course degrees such as MD or Pharmacy/PhD programs.

■ **Workshops:**

The aim of this program is mainly to give practical and interactive classes to students. Workshops are planned and a visit of the prestigious research institute of Hematology at St-Louis hospital, Paris, will be organized.

■ **Sessions:**

Plenary conference by Prof Gareth Williams.

Session 1: Epigenomics and cancer

Session 2: Acute leukemia

Session 3 (all day): Genetics of brain tumors

Session 4 (all day): Workshop on Genomics and Bioinformatics

Session 5: Pharmacogenomics and high throughput screening of drugs

Session 6: Imaging - PET scanning in cancer

Session 7: Colon cancer

Session 8: Breast cancer

Session 8: Kidney cancer

Session 9: Lung cancer and personalized medicine

Session 10: Melanoma

Session 11: Ras signaling pathways in cancer

Session 12: Next generation sequencing (NGS) in cancer

Visit of the research institute of Hematology, St Louis hospital, Paris (all day)

■ **Invited speakers:**

- G. Williams, Bristol, UK
- K. Haigis, Harvard University, USA
- W. Mueller, Leipzig, DE
- P. Guardiola, Angers, FR
- A. Rousseau, Angers, FR
- M. Briet, Angers, FR
- M. Campone, Angers, FR
- P. Juin, Angers, FR
- P. Bigot, Angers, FR
- T. Urban, Angers, FR
- L. Martin, Angers, FR
- O. Couturier, Angers, FR

■ **Criteria:**

This program is open to all French and International students who have already completed 4 years of medicine, pre-med school or midwifery school and who may be interested in pursuing an M.D., M.D./Ph.D. or Ph.D. program and envision a career in oncology and/or are willing to specialize in cancer research.

NORMES ET SANTÉ

ÉCOLES D'ÉTÉ ANGERS 2015

■ 1^{re} édition

29 juin – 4 Juillet 2015

Faculté de droit, d'économie et de gestion
Université d'Angers



■ **Présentation :**

Les universités d'Angers (Faculté de médecine, Faculté de droit, d'économie et de gestion) et de Bretagne occidentale (laboratoire Éthique professionnalisme et santé, EA 4686) organisent une école d'été pluridisciplinaire et internationale : « Les Rencontres de l'éthique ». La session de cette année aura lieu à Angers, la session de l'année prochaine sera organisée à Brest (juin 2016).

Partenaires : Département de Philosophie de l'Université de Nantes, Espace de réflexion éthique des Pays de la Loire, Espace de réflexion éthique de Bretagne.

Responsables : Michèle Favreau, Jean-Marc Mouillie, Antony Taillefait (Université d'Angers), David Jousset (Université de Bretagne occidentale).

■ **Atelier :**

– Réflexion œnologique : la norme du goût (dégustation commentée par un œnologue)

■ **Programme :**

Session 1 : Qu'est-ce qu'une norme ?

Session 2 : Normes et libertés en santé : les questions et les concepts

Session 3 : L'idéologie de la santé et l'éthique des normes

Session 4 : Réflexion historique : éléments cinématographiques de propagande sanitaire

Session 5 : Réflexion juridique : le consentement des personnes vulnérables

Session 6 : Réflexion économique : les incitations du marché

Session 7 : Normes et libertés : enjeux d'éthique du soin (formation, prévention, soins sous contrainte, addiction, autonomie et sécurité des usagers)

Session 8 : Leçons et perspectives

■ **Critères :**

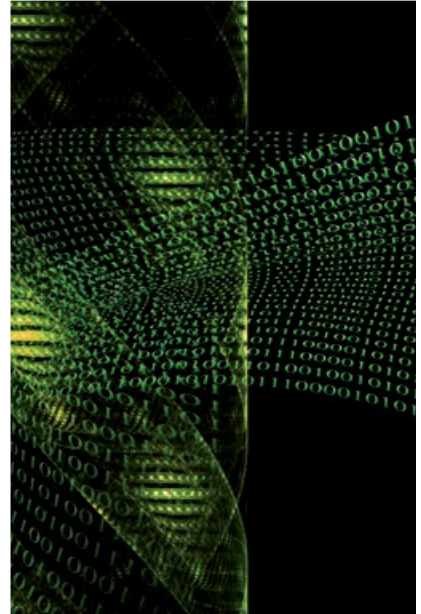
Cette école vise un public d'étudiants de second cycle et doctorants (en médecine, droit, économie, gestion, géographie humaine, sciences sociales, philosophie), professionnels de santé.

■ **Intervenants :**

- C. Lafontaine, Université de Montréal
 - M. Hunyadi, Université libre de Louvain
 - R. Massé, Université Laval Québec
 - L. Visier, Université de Montpellier
 - C. Bonah, Université de Strasbourg
 - F. Crémieux, APHP Paris
 - M. Gaille, CNRS Paris
 - M. Jean, CHU Nantes
- Université de Brest :
- R. Balez
 - P. Genest
 - A. Gentric
 - D. Jousset
 - P. Ouvrard
 - P. Poingt
 - C. Hazif-Thomas
- Université de Nantes :
- J-M. Lardic
 - C. Michon
- Université d'Angers :
- M. Favreau
 - P. Le Gall
 - J-M. Mouillie
 - I. Richard
 - C. Rougé-Maillart
 - A. Taillefait

BIOINFORMATICS

SUMMER SCHOOLS ANGERS 2015



1st Edition 29th June – 10th July 2015 Faculty of Sciences University of Angers

Presentation:

Bioinformatics is an exciting new area of interdisciplinary science. The future of many biological and medical studies promotes smart use of computational tools as an essential knowledge in scientists background. The program developed in this summer school aims at bringing students the ability to conduct ambitious biological studies from big data analysis to extract relevant biomarkers to large scale models engineering in order to enhance biological production. Topics to be covered include different fields of bioinformatics: data processing of genomic data, optimization methods in systems biology, statistics and classification for biomarker extraction, meta-genomics and a few more. Focus is also made on valorization concerns and technology transfer. Workshops and visits of institutes in bioinformatics facilities are of course included.

Sessions:

- Plenary conference by Professor Gareth Williams.
- Warm up session : Informatics for beginners
- Session 1: Statistics and classification for genomic studies
- Session 2: Clinicobiological Databases in genetics
- Session 3: Applications and Pipelines "Next generation sequencing" (NGS) in genetics and genomics
- Session 4: Visit of Biogenouest Bioinformatics core facilities
- Session 5: Bioinformatics and Business companies
- Session 6: Microbial metagenomics
- Session 7: Mapping, Structural note and NGS Data management
- Session 8: Optimization methods for bioinformatics
- Session 9: Computer modeling of living systems: a guided tour to synthetic biology

Invited speakers (among others):

- G. Williams, Bristol, UK
- C. Dina, Nantes, FR
- L. Jourdan, Lille, FR
- D. Milea, Singapore, SG
- R. Redon, Nantes, FR
- A. Bockmayr, Berlin, DE

Criteria:

This program is ideal for those wishing to develop advanced skills in bioinformatics. Prior experience in computer science and computer programming is not required. This summer school is aimed at undergraduate students from 3rd year and graduate students (M. or Ph.D) in biological sciences / medicine / pharmacy / informatics / engineering or other scientific background.

PLANT SCIENCE

SUMMER SCHOOLS ANGERS 2015

1st Edition 29th June – 10th July 2015 Faculty of Sciences University of Angers



Presentation:

This program will provide the students with insight into new developments in plant science research. The purpose is to give students the opportunity to be exposed to multidisciplinary approaches in the field of sustainable management of plant health and quality.

Workshops:

Visits of international research institutes will be organized during the stay such as:

- The GEVES lab (the French Group for the Study and Inspection of Varieties and Seeds)
- The LSV-ANSES (Plant Health Laboratory)
- The CIRM-CFBP (French Collection of Bacteria associated to Plants)
- The ANAN (Nucleic acid analysis) Platform
- The FNAMS (National Federation of Farmers seed growers)
- The ITEPMAI (Institute for medicinal and aromatic plants)
- A botanical garden and a rose garden

The aim of this program is mainly to give practical and interactive classes to students. Several workshops are therefore organized, among them: one workshop on "qPFD: an innovative device for screening and evaluating plant elicitors", one on "In Silico design of plant pathogen identification tests", one on "Field observations of Black spot disease on rose genotypes", one on "Extraction-identification and biological activity testing of plant polyphenols", one on "Macroscopic and microscopic observations of medicinal plants", one on "genetic determinism of QTL", one on "Transcriptomic data analysis", one on "Analytical methods for assessing fruit quality" and finally a last one on "Sensorial methods".

Sessions:

Session 1 : Plant defense stimulation, plant protection and plant memory

Session 2 : Genomic and Bacterial diagnostic

Session 3 : Fungal foliar disease on ornamentals

Session 4 : Weed control in intercropping systems

Session 5 : Metabolomics and medicinal plants

Session 6 : Physiology and Nutritional Quality of seeds

Session 7 : Fruit production, Fruit development and self-thinning

Session 8 : Post-harvest fruit quality management

Invited speakers (among others):

- E. Bucher, University of Angers, CH
- I. Toth, James Hutton Institute, UK
- T. Debener (to be confirmed), University of Hannover, DE
- J-L. Wolfender, University of Geneva, CH
- A. Botton, University of Padua, IT
- K. Gallardo, INRA Dijon, FR

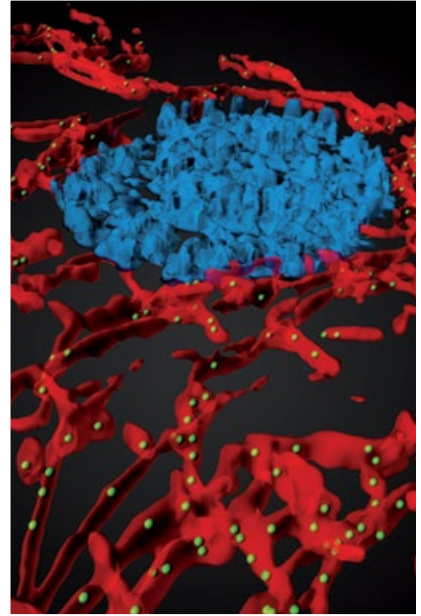
Criteria:

The program is open to undergraduate students from 4th to 6th year of agriculture, plant science and biological science who may be interested to attend M.Sc., M.S/Ph.D. or Ph.D. programs and envision a career in plant science/agriculture...

MITOCHONDRIAL MEDICINE

SUMMER SCHOOLS ANGERS 2015

1st Edition 29th June – 10th July 2015 Faculty of Medicine University of Angers



Presentation:

This program will give to the students an overview of Mitochondrial Medicine from basic research to the bedside.

The course will be entirely taught in English. The purpose is to give students the opportunity to experience multidisciplinary approaches in the field of mitochondrial medicine and research.

Workshops:

- Mitochondrial respiration
- Genotyping of mitochondrial haplogroups
- Mitochondrial imaging
- Oxidative stress
- Mitochondrial bioinformatics
- Discussion and presentation of clinical cases

Sessions:

Plenary conference by Professor Gareth Williams.

Session 1: Pathophysiology of mitochondrial metabolism

Session 2: Mitochondrial DNA haplogroups in evolution and diseases

Session 3: Pathophysiology of mitochondrial dynamics

Session 4: Mitochondria and oxidative stress

Session 5: Genetics of mitochondrial disorders

Session 6: Mitochondrial optic neuropathies

Session 7: Mitochondria and cancer

Session 8: Mitochondrial bioinformatics

Invited speakers:

- V. Carelli, University of Bologna, IT
- M. Haigis, Harvard University, USA
- D. Miléa, University of Singapore, SG
- A. Rötig, Paris-Descartes Université, FR
- F. Vallette, University of Nantes, FR
- P. Yu-Wai-Man, University of Newcastle, UK
- G. Williams, Bristol, UK

Criteria:

The selection of students will be made considering their motivation, English level and previous research experience, if any. The program is open to undergraduate students from 2nd to 4th year (Medicine or pre-med, Midwifery and Science curricula, Young researchers,...)

PRACTICAL INFORMATION | INFORMATIONS PRATIQUES

SUMMER SCHOOLS ANGERS 2015 | ÉCOLES D'ÉTÉ 2015

Social activities

Our summer schools not only offer you a fine selection of interesting courses and scientific visits, they also aim at giving their participants an unforgettable stay in France. Therefore we offer all of our students an attractive social program, including excursions, sports, social gatherings and festivities. The activities will provide the perfect setting for you to get to know one another! A few examples of socio-cultural activities: Welcome barbecue, Kayak session, free afternoon/evening in Nantes and Paris, a day on the Atlantic Coast, a farewell dinner, etc. These activities are mainly free (or cost no more than 5 euros).

Admission criteria

The selection of students will be made based on motivation, level of English and previous scientific experience, if any.

Application procedure

Application forms are available on the page "admission" of each school. The number of places is limited to 35 participants for each summer school.

Application deadline: 15th April 2015

Final answer about your selection: 1st May 2015

Registration and payment deadline: 15th May 2015

Fees

€700 : Research, Cancer, Mitochondrial medicine, Plant Science, Bioinformatics schools (29th June to 10th July 2015) €400 : Ethics school (29th June to 4th July 2015) fees include tuition, accommodation, lunches, scheduled excursions and extracurricular activities during the course. The Summer Schools do not cover the costs of passports, visas, health insurance, or travel to and from Angers. Provided resources: access to the technological platform, university labs, university library, study rooms, multimedia- and videoconference rooms. Each participant will receive a comprehensive binder containing all material presented in the summer schools, as well as a tram/bus pass for the one or two weeks. A certificate of attendance and 6 ECTS will be delivered to the students.

Housing and catering

Access to the university restaurants and residences. Fully furnished single rooms with bathrooms and showers. Shared kitchen but no crockery, cutlery or cooking utensils. Please bring it with you. Facilities include: IT/study room, laundry room, TV lounge, computer room, security phone & badges, wheelchair access, sports facilities, a doorman and a car park. In order to access the Internet all students should bring their own cable.

Programme social

En plus d'une sélection intéressante de cours et d'activités scientifiques, nos écoles d'été permettent de vivre un séjour inoubliable à Angers.

Des activités sont proposées, favorisant les échanges et la découverte de notre environnement.

Exemples : barbecue d'accueil, séance de canoë kayak...

Ces activités sont majoritairement gratuites (ou ne coûtent pas plus de 5€).

Critères d'admission

La sélection des étudiants se fait en fonction de la motivation, du niveau de langue requis et de l'expérience.

Procédure de candidature

Le formulaire de candidature en ligne est à compléter sur la page « Admission » de l'école ciblée.

Le nombre de places est limité à environ 35 par école d'été.

Délai de candidature : 15 avril 2015

Réponse définitive sur votre sélection : 1^{er} mai 2015

Délai d'enregistrement et de paiement : 15 mai 2015

Frais

700€ pour les écoles se déroulant du 29 juin au 10 juillet : Recherche, Cancer, Médecine mitochondriale, Bio-informatique, Végétal.

400€ pour l'école « Normes et santé » se déroulant du 29 juin au 4 juillet. Ces frais incluent l'inscription au programme, l'hébergement, les déjeuners et les activités. Les écoles d'été ne couvrent pas les frais de passeport, visa, assurance maladie ...

Matériels fournis : accès à la plateforme technologique, aux laboratoires de l'université, à la bibliothèque universitaire, aux chambres étudiantes, aux salles multimédias et de visioconférences. Chaque participant disposera d'un vélo à titre gracieux et d'un « pass » pour le tramway et le bus pour la semaine / les deux semaines. Un certificat de présence et 6 ECTS seront délivrés aux participants.

Logement et restauration

Chambres simples entièrement meublées équipées de sanitaires et douches individuels. Cuisines communes non équipées en vaisselle, accessoire de cuisine.... Il vous faudra donc apporter le nécessaire.

Les équipements incluent : salle de cours, laverie, salle TV, salle équipée d'ordinateurs, Wifi, interphone sécurisé et badges, accès fauteuils roulants, équipements sportifs, concierge et parking.





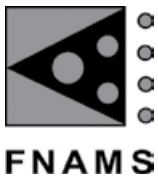
Further information:
summerschools@univ-angers.fr

Vascular Summer School

The Vascular Summer School (VESSAL) will take place in Pisa (Italy) this year, from 18th to 26th June 2015.

More information:

<http://summerschool.cardiovascular.med.unipi.it/>



www.summerschools.univ-angers.fr

