



SUMMER SCHOOLS

UNIVERSITY OF
ANGERS-**FRANCE**

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

Vascular - Research - Cancer
Bioinformatics - Plant science

www.summerschools.univ-angers.fr



ANGERS

SUMMER SCHOOL ANGERS 2014



"Angers is the historical, political and economic chief town of the Anjou region and the 16th largest city in France. It is located in western France close to the Loire Valley, which is a UNESCO World Heritage and famous for its many châteaux and wines. Angers has a unique 12th century fortress which overlooks the Maine River and the world's largest medieval tapestry. With more than 30,000 students every year, it offers a very dynamic lifestyle with frequent cultural exhibitions and festivals all the year round. The city hosts several highly specialized research centres. In 2006, Angers was ranked one of the most business-friendly cities in France. Angers Medical School is close to the University Hospital Centre (CHU) and to the INSERM and CNRS laboratories." Thanks to the investments in developing and maintaining its "Green heritage" by preserving the biodiversity, Angers has been elected "France's Greenest City".

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 European students in an intercultural and interdisciplinary context.

The 55-hours programs include lectures by international researchers (max. one hour) followed with questions and debates, Workshops organized in small groups of students, Visits of research institutions and, for some, Oral presentations on selected topics. The aim of these programs is mainly to give practical and interactive classes to students.



RESEARCH

SUMMER SCHOOL ANGERS 2014

■ 5th Edition 30th June – 12th July 2014 Faculty of medicine University of Angers



■ **Presentation:**

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

■ **Workshops:**

- Visits of international research institutes Oniris (Vet school and research labs), Nantes G  n  thon, Paris.
- The program relies on interactive classes and hands-on activities. Several workshops are organized, among them
- "Meet the entrepreneur" (in cooperation with companies from the consortium Atlanpole Biotherapies)
- "Medical Informatics"
- "Experimental surgery" including hands-on activities in the simulation lab."

■ **Invited speakers:**

- J. Weissenbach, Paris, F
- P. Corvol, Paris, F
- S. Ozanne, Cambridge, UK
- C. O' Driscoll, Cork, IR
- P. Radermacher, Ulm, DE
- F. Luks, RI, USA
- F. Petak and J. Tolnai, Szeged, HU
- J-B. Dupont, Nantes, Fr
- N. German, Harvard USA
- D. Llewellyn, UK
- C. Junien, Paris, FR
- M. Miall, UK
- D. Fernandez-Twinn, UK

■ **Sessions:**

Plenary conferences by Prof Jean Weissenbach, and Prof Pierre Corvol.

Session 1: Fetal programming

Session 2: Nanomedicine

Session 3: From animal experiment to human medicine

Session 4: Immunology

Session 5: Experimental surgery

Session 6: Medical Informatics

Session 7: Gene therapy

Session 8: Metabolism and cancer

Session 9: Neurogeriatrics

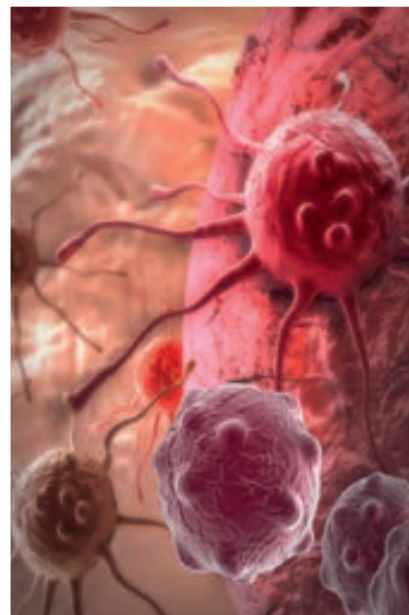
Session 10: From physiology to integrative spatial medicine

■ **Criteria:**

The program is open to undergraduate students from 2nd to 4th year (medicine, pharmacy, dentistry, midwifery, veterinary medicine and science curricula)

CANCER

SUMMER SCHOOL ANGERS 2014



■ 2nd Edition 30th June – 12th July 2014

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:**

Visits of international research institutes

- Radiotherapy unit, University of Nantes
- Oncology lab, University of Angers
- Visits of clinical facilities

The program relies on interactive classes and hands-on activities. Several workshops are organized, among them

- "Genomics, genotyping and data analysis"
- "Breaking out bad news" in the simulation lab

■ **Invited speakers:**

- J. Weissenbach, Paris, F
- A. Buzyn, Paris, F
- A. Brédart, Curie Institute, Paris, F
- A. Nepveu, Montreal, Canada
- M. Park, Montreal, Canada
- T. Littlewood, Cambridge UK
- D. Farber, Boston US
- N. German, Harvard USA
- W. Mueller, Leipzig DE

■ **Sessions:**

Plenary conferences by Prof Jean Weissenbach, and Prof Agnes Buzyn

Session 1: Personalized medicine «Myeloma, from fundamental to clinical research»

Session 2: Communication skills Training in haematology and oncology

Session 3: Cell signaling, oncogenic addiction and cancer

Session 4: Oncogene, Epithelial-Mesenchymal transition & Cancer

Session 5: Cell death and cancer

Session 6: Personalized medicine and target therapy

Session 7: Genomics and hematology

Session 8: Prostate Cancer and surgical innovations

Session 9: Metabolism and cancer

Session 10: Brain tumors: Molecular pathology in adult diffuse gliomas

Session 11: Applications and Pipelines "Next generation sequencing" (NGS) in genetics and genomics

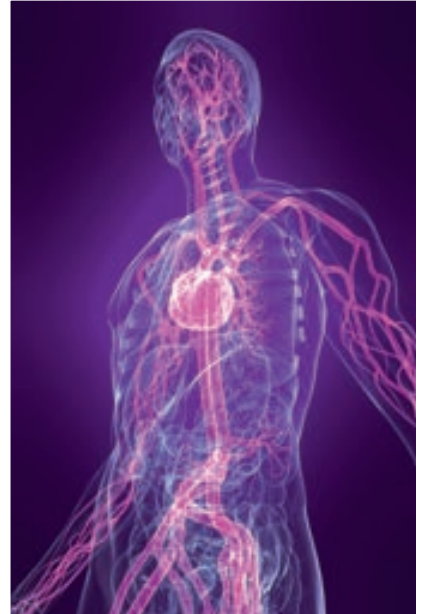
■ **Criteria:**

This program is open to students who already have completed 4 years of medicine, biological sciences, pharmacy veterinary school who may be interested in pursuing a M.D., Pharmacy/Ph.D. or Ph.D. programs, envision a career in oncology and/or intend to specialize in cancer research.

VASCULAR

SUMMER SCHOOL ANGERS 2014

■ **1st Edition** **30th June – 12th July 2014** Faculty of medicine University of Angers



■ **Presentation:**

This program will provide an overview of vascular biology, physiology and medicine from bench to bedside. Topics to be covered include various research to clinical fields in micro- and macro-circulation, vascular biology and reactivity, translational /transdisciplinary approaches, the aging vessel, techniques in vascular investigations and decision.

The purpose is to give students the opportunity to be exposed to classical and original state of the art issues in the fields of vascular physiology, vascular physiopathology and vascular medicine and to facilitate their accession to advanced course degrees such as MD or Pharmacy/PhD programs.

■ **Workshops:**

Visits of international research institutes

- BNMI lab, University of Angers

The program relies on interactive classes and hands-on activities. Several workshops are organized, among them

- "Meet the entrepreneur" (in cooperation with companies from the consortium Atlanpole Biotherapies)
- "Transcutaneous oxymetry"

■ **Sessions:**

Plenary conferences by Prof Jean Weissenbach, and Prof Pierre Corvol.

Session 1: Atherosclerosis "From aging to disease"

Session 2: Microcirculation and Vascular diseases

Session 3: Arterial remodeling

Session 4: Exercise and vessels

Session 5: Vascular diseases: from genetic to patients

Session 6: Inflammation and vascular diseases

Session 7: Animal models in CV studies

Session 10: Thrombosis and Hemostasis

Session 11: Angiogenesis

Session 12: Immunity and vascular diseases

Session 13: Drug design

Session 14: Neural control of the vasculature

■ **Invited speakers:**

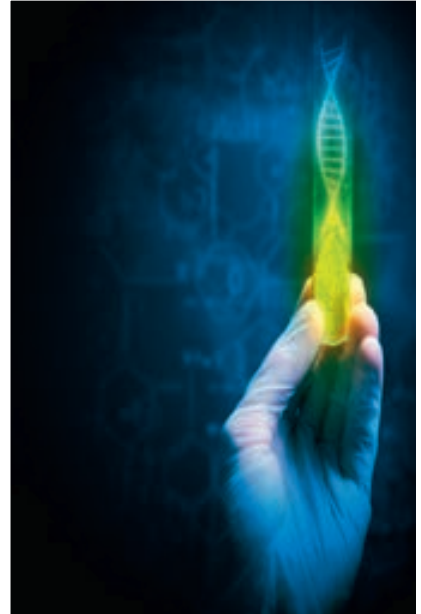
- J. Weissenbach, Paris, F
- P. Corvol, Paris, France
- M. Rossi, Pisa, Italy
- C. Palombo, Pisa, Italy
- P. Lacolley, Nancy, France
- R. Martini, Padova, It
- C. Boer, Amsterdam, NL
- P. Radermacher, Ulm, Germany
- B. Levy, Paris, France
- A. Tedgui, Paris France
- D. Sigaudou, Lyon France
- G. Tew, UK

■ **Criteria:**

The program is open to undergraduate students in medicine / biological sciences / pharmacy from 2nd year to 4th year of study who may be interested in pursuing M.D., M.D / Ph.D. or Ph.D. programs and envision a career in science or medicine in the vascular area.

BIOINFORMATICS

SUMMER SCHOOL ANGERS 2014



1st Edition 30th June – 12th July 2014 Faculty of sciences University of Angers

Presentation:

The purpose of this summer school is to give students an innovative and interdisciplinary insight into the growing field of bioinformatics. The course is suitable for students from different backgrounds, including informatics, engineering, mathematics, biology, medicine, pharmacy.

The purpose is to give students the opportunity to be exposed to classical and original state of the art issues in this field and to facilitate their accession to advanced course degrees such as master programs

Workshops:

Visits of international research institutes

- Bioinformatics platforms, University of Nantes

The program relies on interactive classes and hands-on activities. Several workshops are organized, among them

- "Creating a locus-specific database"
- "Analysis of a metabolic network"
- "Genomic data including Gene expression and high dimensional statistics (Software R)"

Invited speakers:

- J. Weissenbach, Paris, France
- L. Jacob, Lyon, France
- A. Bockmayr, Berlin, Germany
- T. Vogel, Lyon, France
- R. Redon, Nantes, France

Sessions:

Plenary conference by Prof Jean Weissenbach

Warm up session : Informatics for beginners or Biology for beginners

Session 1: Statistics and classification

Session 2: Clinicobiological Databases in genetics

Session 3: Applications and Pipelines "Next generation sequencing" (NGS) in genetics and genomics

Session 4: Bioinformatics and Business companies

Session 5: Microbial metagenomics

Session 6: Mapping, Structural note and NGS Data management

Session 7: Optimization methods for bioinformatics

Session 8: Ontologies

Session 9: Data structure

Session 10: Case study and guided exercices on "Computer modeling of living systems"

Session 11: Bioinformatics and Ethics

Criteria:

The program is open to undergraduate students in informatics, mathematics, engineering, medicine, pharmacy interested in discovering the field of bioinformatics.

PLANT SCIENCE

SUMMER SCHOOL ANGERS 2014

1st Edition 30th June – 12th July 2014 Faculty of sciences University of Angers



Presentation:

This program will provide the students with some insights 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

- GEVES lab (the French Group for the Study and Inspection of Varieties and Seeds)
- LSV-ANSES (Plant Health Laboratory)
- CIRM-CFBP (French Collection of Bacteria associated to Plants)
- ANAN (Nucleic acid analysis) Platform
- ITEPMAI (Institute for medicinal and aromatic plants)
- Visits of a botanical garden, a rose garden, and an organic vineyard

The program relies on interactive classes and hands-on activities. Several workshops are organized, among them

"Experiments in chemical ecology and pest management"

"In Silico design of plant pathogen identification tests"

"Field observations of Black spot disease on rose genotypes"

"Extraction-identification and biological activity testing of plant polyphenols"

"Macroscopic and microscopic observations of medicinal plants"

"Rose phenotyping and genotyping"

"Analytical methods for assessing fruit quality"

Sessions:

Plenary conference by Prof Jean Weissenbach

Session 1: Chemical ecology and Pest management

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: Ornamentals Interaction genotype X environment

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

Session 8: Fruit production and quality

Invited speakers:

- J. Weissenbach
- P. Anderson, Alnarp, Sweden
- M M. López, Valencia, Spain
- T. Debener, Hannover, Germany
- JL. Wolfender, Genève, Switzerland
- MC. van Labeke, Gent, Belgium
- Al. Botton, Padova, Italy

Criteria:

The program is open to undergraduate students in the fields of agriculture, plant science and biological science who may be interested in pursuing Ph.D. programs and envision a career in plant science/agriculture.

PRACTICAL INFORMATION

SUMMER SCHOOL ANGERS 2014

Social program:

Our summer schools not only offer you a fine selection of interesting courses and scientific visits. It also aims at giving the participants an unforgettable stay in France. Therefore we invite all students to an attractive social program, including excursions, sports and social gatherings and festivities. The activities will provide the perfect setting for you to get to know each other!

Few examples of socio-cultural activities: Welcome barbecue, Musical evening at the "Festival d'Anjou", Kayak session, free afternoon/evening in Nantes, Atlantic seacost day, Rowing session, Free afternoon/evening in Paris, Farewell dinner, etc.

These activities are mainly free (or cost no more than 5 euros).

Admission criteria:

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

Application procedure

Please complete the online application form and also submit the required documents under the following link: <http://summerschools.univ-angers.fr/schools/admission/online-application.html>

Number of places is limited to about 40 participants for each summer school.

Application deadline: 1st May 2014

Final answer about your selection: 15th May 2014

Registration and payment deadline: 30th May 2014

Fees

700€ and 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 France.

Provided materials: 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 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 do take 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.





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Further information:
summerschools@univ-angers.fr



UNIVERSITÉ DE NANTES



www.summerschools.univ-angers.fr

