MASTER OF SCIENCE (MSc) in BIOBANKS AND COMPLEX DATA MANAGEMENT 2021
OUR AMBITION: TRAINING THE NEXT GENERATION OF BIOBANKERS

“The high-level training of the professional master’s degree in «Biobanks and Complex Data Management» opens immediate career opportunities with high responsibility in a variety of sectors such as human health, pharmaceutical and biotechnology industrial laboratories, and agricultural industry. This training of excellence will allow integrating French, European or international companies and academic institutions.”

Paul HOFMAN, Director of the MSc in Biobanks and Complex Data Management (UCA IDEX Jedi).

The fast development of biobanking and the huge number of biobanks around the world create a high demand of experts in biobanking in the future.

To respond to this increasing necessity, «Biobanks and Complex Data Management» Professional Master of University Côte d’Azur (UCA IDEX Jedi) prepares graduates for high-level positions in biobanking with a strong emphasis on industrial, technological and international environment.

KEY FIGURES ABOUT BIOBANK

- 85 biological resource centers in France
- 2500 biobanks in the world
- 800 research teams provided with and working on biological samples in France
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Project about two multicentric large-collections of DIABETES management and its quality, I performed a data management to specialize my training and I was more focused in data (ii) HCB-IDIBAPS Biobank in Barcelona, where I was able and data project about biomarkers in Lung Cancer field. Within a Biobank and I performed at the same time a clinical project with the methods validation of an aliquoting Biobank and Complex Data Management.

Andrés GALLARDO
Promotion 2018-2020 «JEDI»

My name is Andrés Gallardo, actually a Master 2 student in Biobank and Complex Data Management. During my scholarship, I had the opportunity to be trained by a lot of professional people in the Biobank field, coming from high-level Biobanks around the world. I also had the opportunity to perform two 6-month internships in two Biobanks of reference: (i) Biobank Côte d’Azur in Nice, where I learned all the dynamic and important technical processes within a Biobank and I performed at the same time a clinical and data project about biomarkers in Lung Cancer field. (ii) HCB-IDIBAPS Biobank in Barcelona, where I was able to specialize my training and I was more focused in data management and its quality. I performed a data management project about two multicentric large-collections of DIABETES in SPAIN. I decided to continue in the data line, I would like to establish myself in Barcelona and work as a data manager because it is a very extensive field of knowledge and I really want to learn more as per clinical or medical data management inside a Biobank.

Laurent ONIVOGUI
Promotion 2017-2019 «Next-Generation Biobanking»

After achieving my internship training in Pasteur Institute of Guinea from January to July 2019, I have been recruited. Since, October 2019, I am biobank and quality assurance Manager of Pasteur Institute of Guinea. I am in charge to set up the governance of the biobank and implement the quality management system according to ISO 9001:2015 and ISO 20386:2018. During the COVID19 pandemic in Guinea, I have actively participated to collect and storage the biosources from COVID19 patients in biobank of Pasteur Institute. Despite the difficulties related to biobank management and obtaining of ethics and regulatory associated data, I have prepared all the associated the documents related to the biological samples stored in biobank of Pasteur Institute of Guinea.

Mehdi KARABORNI
Promotion 2016-2018 «Biobank06»

My first experience in biobanking kicked off in Nice. What better place to start than a biobank integrated in an internationally recognized pathology lab with versatile and brilliant people trained in several fields. Two projects animated this amazing internship. The first one was the management of an exceptional big DNA collection and its duplication into minor distant collections. The second one was the overview and optimization of the economic model of the biobank. Both projects resulted in two publications. A great start, a great end...my first experience was successful.

Following my graduation, I started to work in one of the largest and cutting edge biobanks in Europe, Biobank Graz (Austria). Valuating the biological collections for the benefit of research was the main mission I had been given. After 2 years of internship and work, in Graz, I learned a new culture, expanded my skills and brought out the best in myself. Always on the lookout for new challenges, I afterwards moved to Belgium to work at Vrije Universiteit Brussel as biobanking coordinator. This environment is home to world-class biomedical research conducted by top investigators in their fields. My main missions have been to harmonize the biobanking initiatives and support the researchers in their specific needs. I continue to do my work everyday with the same enthusiasm fuelled by my desire to contribute to the future of research for the benefit of patient healthcare.

Qian CEN
Promotion 2016-2018 «Biobank06»

My internship content was mainly focused on the establishment and optimization of paraffin block in a tumor biobank, to understand how a biobank works and to optimize the FFPE blocks management system.

I found that the division of the workflow in LPCE biobank is very detailed and efficient. My second internship (M2) content mainly has the following three parts: (1) Learning the daily operation and management of the biobank in CNGB, including sample reception, pre-processing and storage processes, quality management, etc. (2) In charge of the information construction of the sample sharing of the CNGB. Provide IT development team with the design requirements of the sample sharing platform and be responsible for the daily operation of the platform. (3) Responsible for organizing biobank technical training, including course design, training program planning and event organization.

Djemila KOHIL
Promotion 2016-2018 «JEDI»

I am Djemila Kohil, after years in pharmaceutical development company. I had the opportunity to join the Master of Biobank and then to integrate Median Technologies company for the first internship of the Master. It represents a considerable change, and very motivating experience to acquire new knowledge, question the knowledge existing and find connections in health science.

MedianTechnologies is located in Sophia Antipolis, and is biotech company providing solution for healthcare development using Artificial Intelligence (AI) tool based on Medical Image Phenotyping. I have done my internship under the supervision of Corinne Ramos Director of Biological scientific research center, among a friendly dynamic team. One target was to organise the availability of data collection of medical images and samples with well-documented phenotypic data. It allows me to understand the approach for imaging biomarker development using Artificial Intelligence supporting medical decision.

In the context of clinical research contracts for AI development I started to work on a project for data sharing and security aspects, data quality impacting regulatory aspect: role of standards for controlling preanalytical parameters of biosample collection. I am very happy to apprehend this new field and take account of transforming potential that biobanks can bring in participating to AI development in healthcare systems.
A Unique European Professional Master linking Biobanking and Data Management

This Professional Master has the ambition to provide knowledge, experience, and practical skills that will qualify graduates of the Master for working into the multidisciplinary field of biobanking (humans, animals, plants, and other living organisms) and complex data management.

The Master Biobank and Complex Data Management is being part of the international degree programs offered by the Université Côte d’Azur which emphasize excellence and innovative pedagogy. These are a new generation of training programs, which offer a master’s level degree, supported by the Initiative of Excellence (IDEX).

Key knowledge and skills

- Organization and implementation of biobanks at the national and international levels
- Quality management and risk management of biobanks
- Infrastructure of a biobank, budgeting and biobank sustainability or ‘Biobankonomic’
- Sample management and ethical, legal, and societal aspects of biobanking
- Management of complex data associated to biological samples
- European and International biobanking networks
- Professional development and marketing

First year M1
- First year M1
- Human Health & Agro-environment 6 ECTS
- Quality in Biobanking 6 ECTS
- Bioethics in Biobanking 6 ECTS
- Safety and Security in Biobanking 6 ECTS
- Project Management 3 ECTS
- Technical Unit at the BioBank06 3 ECTS

Second year M2
- Biobankonomic 6 ECTS
- Big Data for Biobanking 6 ECTS
- Networking in Biobanking 3 ECTS
- Professional Integration 6 ECTS
- Marketing, Communication & English 6 ECTS
- “Success Story” in Biobanking 3 ECTS

2x6 months internship in Biobank (60 ECTS)

Hands-On Seminars (students oral session, SOS)
In pair working, students will dedicate themselves to group-based studies. They will be asked to defend their analysis of a concrete, current issue raised by a biobank. Their recommendations will be presented in front of faculty members.

Internship report
Students must write each year of training, an internship report (after 6 months of internship), followed with an oral defense. It represents an important component of the Master’s learning experience. The objective of writing internship report and those 2 oral defense, is to explore cutting-edge research implementation in daily practice within a highly competitive biobanking environment.

A Master which benefits from the UNIVERSITÉ CÔTE D’AZUR label and network

A wide network of International academic and industry partners

A 2 years Professional Master (UCA IDEX Jedi)

100% of courses in English

2 internships of 6 months in Biobank

High teaching quality

MSc labelised by the French Society of Cancer Immunology

2X 6 months internship in Biobank

JORF n°0068 du 19 mars 2020
Text n° 26
Order of March 17, 2020 relating to the awarding of the master’s degree to certain diplomas issued by Université Côte d’Azur.
NOR: ESRS1935609A
Today, there is an international challenge in the harmonization of biobanking activities to guarantee data and sample qualities. Whole the international biobank networks, organizations and societies (including "infrastructure biobanks") as well as superregional biobanks need to be involved in it.

In that way, the Master welcomes applications from candidates of all nationalities & students benefit from more than 45 experts and well known teachers, including:

**FRANCE**

Jean-Louis PHAM  
PhD, Research coordinator IRD, Montpellier  
Plant geneticist Senior scientist

Christian CHABANNON  
MD, PhD.  
Cell Biology at Aix-Marseille University School of Medicine.  
Board-certified in Hematology and Medical Oncology

Bruno CLÉMENT  
Scientific Director of Infrastructure Biobank, Inserm UMR 993 ("Liver, Metabolisms and Cancer")  
University of Rennes 1, France

Jean Guillaume BAUMANN  
MD, Business development Manager  
Agilent Technologies, Inc., Switzerland

George DAGHER  
PhD Deputy Director, Clinical Research Dept, INSERM, Paris

Pierre LAURENT-PUIG  
Professor, University of Paris Descartes Medical school, Paris  
Responsible for the Clinical Oncogenetic Unit into the Department of Biochemistry at the European Georges Pompidou Hospital

Emmanuelle RIAL–SEBBAG  
PhD in Health Law, Lawyer  
Researcher in health law and bioethics, Toulouse

**INDUSTRY PARTNERS**

Robert HEWITT  
PhD, Founder & manager  
Biosample Management Ltd  
United Kingdom

Alexis PERISIC  
PhD, Global Scientific Director  
for Foundation Medicine Inc./Roche

Gilles ERB  
PhD, Global Scientific Director  
for Foundation Medicine Inc./Roche

Thomas DI MAIO  
Head of Oncology Diagnostic  
AstraZeneca, Paris, France

Philippe VAGLIO  
PhD, Scientific Director  
Modul-Bio France

**INTERNATIONAL**

Karl-Friedrich BECKER  
PhD  
Head the Laboratory for Experimental Pathology  
Institute of Pathology Technical University of Munich, Munich, Germany

Michael H. ROEHL  
M.D., Ph.D., Director of the Precision Pathology Center  
Memorial Sloan Kettering Cancer Center, New York City

Ben BRAY  
MBChB MD MRCP MFPH MSc  
Medical Director  
Real World Insights, London, UK

Maria Grazia DAIDONE  
Director of the Department of Experimental Oncology and Molecular Medicine, INT (Istituto Nazionale Tumori), Milan, Italy

Giorgio STANTA  
Professor of Pathology  
at the University of Trieste.  
Head of the Molecular Histopathology Laboratory, Italy

Kurt ZATLOUKAL  
Prof of Pathology, Deputy Head Dept. of Pathology - Medical University of Graz, Austria

Karoline SARGSYAN  
MSc Managing Director International Biobanking and Education at Medical University of Graz, TEDx Organizer Graz, Austria
**KEYS FIGURES OF MASTER’S STUDENTS**

- Total number of students (2016-2020): 55
- International Students (last 5 promotions): 46%

**INTERNSHIPS**

- France: 62%
- Private sector: 25%
- Public sector: 75%

**INTERNATIONAL STUDENTS FROM**

(Countries of origin): Bolivia, Brazil, Guinea, Tunisia, Belarus, Kenya, Russia, Pakistan, China, Caribbean, Senegal, Morocco, Italy, Rwanda, Iran, Afghanistan, India

**JOB POSITION AFTER GRADUATION**

- Found a job after graduation: 86%
- Recruited at their place of internship: 40%
- Continue studies: 14%

**CURRENT JOB POSITION CLASSIFICATION**

- Management: 50%
- Technical: 22%
- Quality: 17%
- Data: 11%
ADMISSION PROCESS

The master is open to high-level graduates holding Bachelor degree + 3 from an academic institution in the field of Life Sciences (biology, pharmacy, biotech etc.), who have interest in the field of biobanking or wish to specialize or broaden their professional knowledge in biobanking.

APPLICATION PROCESS

It is applying for students from French and international institutions:

The selection is a 2 phase process:

A first selection is made, based on the evaluation of your completed application form and supporting documents. Apply online.

Then, pre-selected applicants are invited to a face-to-face or Skype interview. They are encouraged to discuss their unique background, motivation, interests, and goals during this interview.

The Master welcomes applications from candidates of all nationalities who are fluent in English. A Language Certificate may be required. You are able to commit at least 6 months internship abroad (M1, M2 or both).

Application deadline no later than June 30th, each year.

Admission Results no later than September 10, each year.

TUITION FEES

The tuition fee may vary according to your residence status, namely if you are a resident of an EU country or of a country outside the EU.

In addition, financial aid (need-based or merit-based scholarships) will be available to students, and other sources of funding will also be available through each training course.
Université Côte d’Azur is a recently created cluster of higher education establishments on the French Riviera that brings together the major players in higher education and research on the Côte d’Azur. Université Côte d’Azur aims to develop a new, 21st-century model for French universities, based on new interactions between disciplines, a new form of coordination between research, teaching, and innovation, and strong partnerships with the private sector and local authorities.

In January 2016, Université Côte d’Azur won a prestigious “IDEX” award from the French government for its UCA Jedi project, placing it among the top 10 world-class, comprehensive universities in France.

13 Outstanding institutions, working together as ONE UNIVERSITY

- Université Nice Sophia Antipolis (UNS)
- CNRS
- INRIA
- Observatoire de la Côte d’Azur (OCA)
- Centre Hospitalier Universitaire of Nice
- EDHEC
- SKEMA
- A consortium of 6 Art schools
- A leading national center for simulation and innovation in hematology, biological resources, and therapies
- National Research bodies multidisciplinary and emblematic in digital sciences
- 1 of the 3 French SPU establishments with a strong commitment to international projects
- An active college on the international scene
- 2 Business Schools present in all international rankings
- Research-intensive, present in all international rankings
- 4,218 persons involved in research in A or A+ ranked laboratories
- 76 national and 48 international prizes and awards
- 30,000 students: 1,700 Ph.D. students, 8,000 Masters students
- 100 Europe funded projects
- 20% foreign students

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Date of publication: october 2020
Contact Us

MSc in Biobanks & Complex Data Management
Nice, France

Director: Professor Paul Hofman
Deputy Directors: Dr Nicole Arrighi, Professor Marius Ilie & Dr Elodie Long-Mira

@: msc-biobanks@univ-cotedazur.fr
Administrative Secretary
Phone: +33 492 03 74 79


CAMPUS VALROSE
Faculté des Sciences
Parc Valrose
28, avenue Valrose
06108 Nice

HOPITAL PASTEUR 1
Bâtiment J,
30 Voie Romaine
06000 Nice

@masterbiobank

Master Pro Biobanks and Complex Data Management - UFR Sciences Nice

Partners

http://unice.fr/faculte-de-medecine/presentation

http://univ-cotedazur.fr/

www.oncoage.org

www.biobanques.eu

www.chu-nice.fr

www.ipmc.cnrs.fr

www.inra.fr

www.inria.fr

www.canceropole-paca.com/