



UNIVERSITÀ DEGLI STUDI DI TORINO

ID

TIC02_DIP_BIOTEC

Visiting Professor Program Academic year 2020/2021

DEPARTMENT OF MOLECULAR BIOTECHNOLOGY AND HEALTH SCIENCES

TEACHING COMMITMENT: 12 hours

COURSE TITLE

Immuno-based Assays for Translational Medicine 1

TEACHING PERIOD

1st term

SCIENTIFIC AREA

Experimental medical science

LANGUAGE USED TO TEACH

English

The Degree Course is entirely taught in English

COURSE SUMMARY

The course illustrates:

- approaches for the immunological profiling of tumor microenvironment (isolation of circulating and/or tumor cell-released HLA-peptide complexes, antibody-antigen immunocomplexes and identification of HLA-bound and antibody-bound peptides by mass spectrometry);
- the identification of cancer biomarkers and therapeutic targets by harnessing the immune humoral and cellular response;
- novel immunotherapeutic strategies for cancer prevention.

LEARNING OBJECTIVES

Students will acquire an advanced level of knowledge on how a systems-based approach including immunomic, proteomic and genomic profiling of mouse models, human biospecimens, and cancer cells can be integrated to understand host anti- or pro-tumor responses and identify new diagnostic

markers for solid tumors. In the second part of the course, students will understand how the immunological profiling of the complex pro-tumorigenic milieu may uncover novel targets for the development of immunotherapeutic approaches and vaccines to be applied in cancer prevention and treatment.

TUTORSHIP ACTIVITIES (IF APPLICABLE)

LAB ACTIVITIES (IF APPLICABLE)

OTHER ACTIVITIES (IF APPLICABLE)

The Visiting Professor will give also seminars to PhD students and research fellows about the immunoproteomic approaches to dissect the immune response to tumors.

VISITING PROFESSOR PROFILE DESCRIPTION

The Visiting Professor candidate for this course module should meet the following requirements:

- Strong background in immunology and immune-based technologies, cancer biology and cancer prevention as demonstrated by high-impact scientific publications, participation at international meetings and coordination of research projects;
- At least four-year work experience in an English-speaking Academic Institution;
- Teaching experience is desirable but not mandatory.

CONTACT PERSON AT THE DEPARTMENT

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