

Faculty of Philosophy, Sciences and Literature of Ribeirão Preto/University of São Paulo (FFCLRP/USP)

Postgraduate course in the Chemistry Department

With the creation of the new Graduate Program in Chemistry, Analytical Chemistry and Biochemistry, who had no graduate programs in the unit, which led teachers to act in the same graduate programs from other units or other institutions were included, opening the prospect for all members of the Department of Chemistry FFCLRP/USP can participate in a single program. This integration has produced a program graduate who was born with extensive experience in training teachers and doctors, with an adequate infrastructure, with a consistent curriculum and offering candidates a wide choice of lines of research.

It should be emphasized the interdisciplinary nature of this program. Biochemistry and Biophysics are officially classified as different areas within the Large-Area Life Sciences, while the chemical is classified as an Area of Exact Sciences and Earth. This program, however, considers the area of chemistry in its broadest aspect, the permeating Large-traditional areas of Exact Sciences, Life Sciences and Humanities.

A feature of the program is that it was structured without the traditional division into areas of concentration. The deployment of a single area (Chemistry), enables more effective collaboration between different research groups, greater flexibility in planning for the study of students and a more efficient allocation of resources. This proposal comes against the needs that arose in 2006, the year he began the course in chemistry with specialization in Forensic Chemistry, and is restructuring the course of Bachelor with the implementation of the powers of technology, biotechnology and agriculture industry, providing soon the beginning of activities in the area of undergraduate Environmental Chemistry. These new sections confirm the trend of multi-disciplinary science of the century, aimed at training students and future professionals to meet new market needs and challenges of knowledge, a characteristic that is supported by the Graduate Program in Chemistry. The

Graduate Program in Chemistry offers a stable faculty, 37 faculty members and six permanent employees, a total of 42 counselors. Of these teachers, 39 are part of the faculty of the Department of Chemistry, Faculty of Philosophy, Sciences and Letters of Ribeirão Preto and 03 teachers sit on the board of the Faculty of Pharmaceutical Sciences, USP.

The scientific faculty, released almost entirely in international journals indexed by ISI, has a significant student participation. While the average publications per faculty member is good, efforts have been made to increase the production of that portion of teachers who have put themselves below the national average. This paper presents the results, if we observe the increasing number of guiding the program entered into cooperation projects between HEIs and other international agreements via bi projects with France, Portugal, Cuba, Uruguay, United Kingdom, Italy, Spain and United States.

The FFCLRP-USP offers two undergraduate courses in Chemistry: The Bachelor (full time) with 60 annual openings and Degree (nighttime) with 40 vacancies annually. The increase in vacancies of BS 2006 (from 40 to 60) due to the implementation of the following qualifications: BS in Forensic Chemistry, Bachelors major in Chemical Technology, Biotechnology and Agroindustry, besides enabling the restructuring of the BS in Chemistry with further approval of the Bachelor of Environmental Chemistry, to be implemented after the release of funds for this purpose, confirm the trend of multi-disciplinary science of the century, aimed at training students and future professionals to meet new market needs and challenges of knowledge. It should be noted that the Forensic Chemistry Course is the first in Brazil. Increasingly, the University of Sao Paulo invests in professional training citizen who acts not only on the labor market, but also in the social area, seeking to reduce inequalities in a country so great. Almost all students have opted for conducting basic scientific research, which puts them in direct contact with graduate students, often working in the same research project. After the reformulation of the Bachelor course, increased the interaction of graduate students, which became part of the research groups for a time between one and three years in some cases doing internships at several research groups from different sub-areas of Chemistry. This stage has been very important in the decision of the students in the choice of the research or mentor who will eventually graduate school.

Among the activities developed by guiding the program, PROCAD noteworthy projects in partnerships with other HEIs and INCT Project, involving HEIs in other states, their respective research groups and graduate programs. Within the scope of development of these projects and their objectives, there is an obvious and real transfer of benefits to society, resulting in centers, outpatient clinics and extension services to society.

Some research lines that have been developed not only in the Chemistry Department, but in the FFCLRP/USP, that involved public health are listed below:

- Mechanisms of risk and protection at school age.
- Prevention and intervention in developmental disorders: family and education.
- Prevention of problems of development and child behavior.
- Pediatric Psychology.
- Dialogism in development processes of children with and without special needs.
- Juvenile delinquency: trends and trajectories of development and intervention.
- Domestic abuse of children and adolescents: prevalence, risk factors, psychosocial development and interventions.
- Socialization and Human Development: Vulnerability, risk and protective.
- Production of meanings and practices of health care.
- Construction of the confrontation in the health-disease.
- Groupality and mental health.
- Psychosocial approaches in health work.
- Psychology and health in the community.
- Children's mental health.
- Psychology and psychosomatics: diagnosis and psychological intervention.
- Technological development and innovation applied to health and the environment.

- Evaluation of the toxic activities of xenobiotics and their qualitative and quantitative analysis in biological and environmental matrices.
- Analytical methods for the determination of drugs of abuse in biological samples.
- Investigations of the molecular mechanisms involved in the process of infection of human cells by dengue virus.