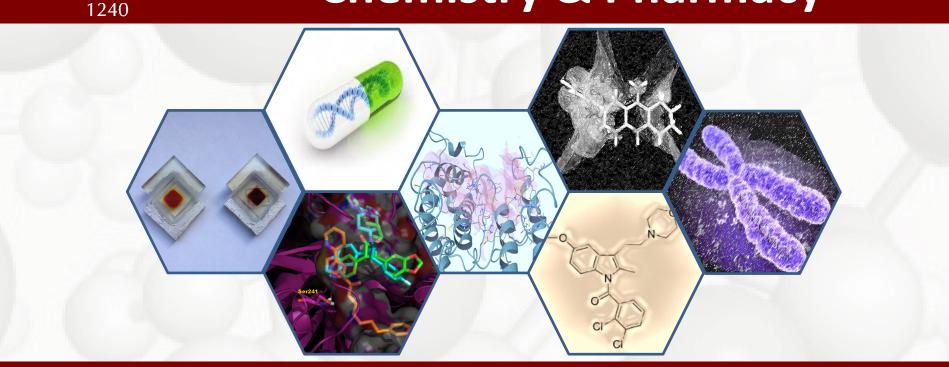


UNIVERSITÀ

**DI SIENA** 

# University of Siena Department of Biotechnology, Chemistry & Pharmacy



University of Siena is a partner of Science without Borders Initiative

http://www.unisi.it/

#### http://www.dbcf.unisi.it/it



## **University of Siena at a Glance**

The University of Siena, Italy, built up in 1240, is one of the oldest university in Europe and is world-renowned for its excellent programs. The excellence of Siena University has been very recently recognized as the best university in Italy in 2014. Siena University is a partner of the Science without Borders Initiative of the Brazilian Government. There are 15 Departments to serve some 15,000 students, some of them located within the Middle-Age walls of the City in beautiful buildings. Siena is a city-campus and for those students who like to spend their leisure time engaged in the natural beauty, Siena offers a variety of surroundings in the beautiful south Tuscany



**DI SIENA** 1240

## **Research at Department of Biotechnology, Chemistry & Pharmacy-UNISI**

**UNISI Department of Biotechnology, Chemistry &** Pharmacy is among the best in the nation, offering students the opportunity to study and to do research in a variety of fields, including medicinal chemistry and bioinformatics, biochemistry, bio-physical chemistry, organic chemistry, materials chemistry and nanotechnology

RUDWERSIT





In the last three years 2011-13 the MedChem and the **OrgChem Units published more than 200 manuscripts in** peer reviewed high impact factor international journals. Basic and applied research are carried out in the Department labs and in conjunction with major multigroup efforts. Shared research interests are cultivated by collaborations, talks, seminars, regular scientific conferences, interdepartmental research units and interuniversity research centres like the NatSynDrugs (www.natsyndrugs.org)



### **Our Principal Topics of Research**



Drug Development for Parasitic infections (Chagas, Leish, Malaria), Cancer, Pain, Neurodegenerative disorders, Rare diseases, Viral infections

Inhibition of bacterial β-lactamase enzymes: development of inhibitors and mechanism of action

**CADD** and **Bioinformatics** 

Theoretical modeling of the redox and spectroscopic properties of transition metal compounds Design, synthesis and applications of new organic sensitizers for nonconventional photovoltaic cells

Nanostructured oxides and hybrid polymer-nanoparticle systems for biomedical applications

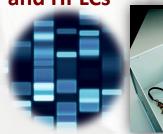
Genomic search for new diagnostics

Enzymes for Biotechnological Applications



### **Department Facilities**

**Computer facilities permeate the DBCF environment, from routine access** to workstations by all students to the use of the most powerful vector and supercomputers in the department facility for specific research activities. In addition to a variety of workstations used in research groups, the department houses the facilities associated with the X-Ray Lab and a first-rate NMR Instrumentation facility. Advanced instrumentation plays a crucial role in the modern innovative research at DBCF. Complex instrumentation is made available to the research community through spectroscopic and molecular characterization facilities, which are also committed to the training of research personnel in the operation of sophisticated instrumentation. These include peptide synthesis facilities, confocal microscopy, and electron microscopy. The macromolecular structure group has facilities for X-ray diffraction. In addition, DBCF houses MS-MS, GC-MS, LC-MS, a Microwave-based synthesizer, EPR, CE and HPLCs











## Graduate & Undergraduate Programs and Courses at DBCF-UNISI

Undergraduate Programs and Courses at DBCF-UNISI Pharmacy – Pharmaceutical Chemistry & Technology (5 years) Chemistry – first cycle degree (3 years) Chemistry–second cycle degree (2 years)





#### **Graduate Programs at DBCF-UNISI**





The Ph.D. programs (three years) in the Department of Biotechnology, Chemistry and Pharmacy offer wide opportunity and unusual flexibility for advanced study and research, and are designed to encourage individuality, independence, and excellence in students. The department has neither a system of cumulative examinations nor a written major examination. There are relatively few course requirements and great flexibility as to which courses may be taken. Students who have completed the undergraduate programs in the Department of Biotechnology, Chemistry & Pharmacy may participate to the selection for candidates for the School of Doctorate in Chemical and Pharmaceutical Sciences and for the School of Doctorate in Biochemistry and Molecular Biology



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#### Contacts





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