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## P09-22

## A virtual laboratory to introduce molecular diagnosis techniques in students' training

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Analytical tests on genetic material are essential in diagnosis of many diseases as well as in pharmacogenetics: the choice of drugs depending on their anticipated efficiency for a particular individual. Limitations in a teaching laboratory regarding the use of samples, techniques and equipment should not prevent the students to receive complete and up-to-date training on these molecular procedures. The use of simulations may fill such a gap, and it is particularly convenient that they are true spaces for experimenting, much better than just animations or videos that always progress in the same way and end with the correct or expected result. We present here a virtual laboratory that may alleviate this shortage; it allows to perform experiments centred on the examination of polymorphic regions of the genome. The techniques offered are fragmentation of DNA using restriction enzymes (RFLP assay), PCR and electrophoretic separation. The system allows the users to design their own experiment and explore conditions, amounts, combinations... The results obtained are not prefabricated, but will depend on the actual conditions used. Such an open exploration may be very significant for assimilation of the underlying scientific concepts, both methodological and diagnostical, and to gain relevant professional abilities like experimental design, observation and analysis of

This tool is freely accessible (http://biomodel.uah.es/en/lab/) and will afford incorporation of virtual practicals in the syllabus, aiming to introduce students in the knowledge of some modern methodologies for genome analysis, which is crucial for their professional future and has applications not only diagnostic but also in fields like forensics, identity testing or food analysis

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List of Papers accepted

**SEPTEMBER 18, 2017** 

List of Travel Grants

SEPTEMBER 5, 2017

**Payment Deadline** for Registration with a free abstract

**AUGUST 28, 2017** 

Late/On-Site **Registration** Opening and payment (no abstract submission)

**AUGUST 24, 2017** 

**Early Registration** Closing

**Abstract Submission** Closing

**Invited Abstract Submission Closing** Deadline for Travel