a blood culture concentrate) is placed on a plate that has a polymeric matrix. This is irradiated with a laser that vaporizes the sample with ionization of several molecules, which are aspirated in a vacuum tube and taken to a detector: the time of flight varies according to the molecule. This is transferred to a chart with several peaks and each bacterial or fungal species has a specific graph. A computerized database interpreters and provides the result – all very fast\(^3\). Therefore, it is a mass spectrometry application.

This technique enables making complex microbiological diagnoses, such as the correct specification of coagulase-negative staphylococci\(^4\) or the sorologically slow and subject-to-error definition of *Salmonella enterica* serovars\(^5\). It is possible to diagnose medically important fungi\(^6\), as well as mycobacteria with some technical modifications\(^7\). As the technique is more often used, the databases become more complete and identification improves. The databases are proprietary, which is a disadvantage when compared to nucleic acid databases, such as BLAST, which are public and for free, but subject to wrong deposits and alterations. And the proteomic databases, are so far more carefully evaluated before being updated. By the way, updating is a permanent process and is included in the contract to use the machines.

The devices are already available for demonstration in Brazil and we hope the *Agência Nacional de Vigilância Sanitária* (Anvisa) [National Health Surveillance Agency] will not hold registry, so that we can have this powerful resource to benefit our patients. Microbiology has always been very slow in the clinical laboratory as compared to other areas. Finally, we can provide the results in a useful and timely manner. There is no point in explaining to clinicians which is our bacterium carefully cultivated after the patient has passed away.

The antibiogram is stays as a typically phenotypic test, which requires an isolated, viable bacterium in a pure culture. This test will take some time but there is evidence that proteomic studies could at least suggest some types of resistances.

**REFERENCES**