

Dear reader:

In 2013, in order to fulfill the new university regulatory framework of the country, the UPS commissioned the GESPLAN group of the Polytechnic University of Madrid to carry out a consultancy to undertake a strategic action of positioning towards a Research University. After several missions of "work with the people" of the Academic Community, the result was summarized in the Notebook of Reflection University 14: "Towards an academic community that investigates" published in 2014. In that year 2013, when the consultancy was undertaken, the UPS was in position 6 611 in the world and 13 in Ecuador (Webometrics, 2013).

The team of the UPS led by its Rector, Dr. Javier Herrán made strategic changes to improve the managing of investigation; and currently the university occupies the 2,993th position in the world (Webometrics, 2019). The advance of 3,618 positions in 6 years, has allowed to validate the adopted strategy and the management model where the research groups have been the pillar, developing lines of research and strategic areas of knowledge in connection with society. In these years, more than 300 teachers have been trained to carry out research work in scientific fields and educational innovation.

One of the strategies for improvement is the inclusion of LA GRANJA magazine in the area of Life Sciences in 2018, as the first university publication in Ecuador to be included in SCOPUS. In the same way, together with other journals, it has been indexed in the Emerging Source Citation Index of the Web of Science (WOS).

In this edition, articles by authors from 6 countries and 11 Universities and Research Centers are presented, addressing the important topics of environmental, life and agricultural sciences. We will begin with Dr. Jimmy

Quisirumbay, from the Central University of Ecuador, who presents a bibliographic review of swine nutrition. Next Drs. Pagliaro and Lowy, present their research on efficient formulations for energy saving in batteries from the University of Maryland and Northern Virginia. And from the National Polytechnic Institute of Mexico City, Dr. Pablo Escamilla, presents efficiency studies on biogas estimation models in landfills.

On the other hand, from the ESPOL and the National Autonomous University of Costa Rica, Edwin Rolando Jiménez and his team, give us an idea of the changes of biomass due to the effects of climate change. Also, in a collaboration between the UPS and the University of Vermont, Paola Duque et al., Present a detailed mass balance in austral watersheds. Reinviando healthy agricultural practices, from the EPN, Gabriela Bonilla and David Singaña through statistical analysis question the techniques of the "green revolution" and the yield per hectare. While Pablo Marini and Ricardo Di Masso, present indicators of efficiency in cattle related to the ages of the first birth.

Finally, we close this issue showing the potential of our natural resources, first of all, Cristina López and her team from the UTE, show us under what storage conditions the antioxidant properties in wines elaborated with Flor de Jamaica are best preserved. While, Mónica Espadero and her team of researchers show us the microbiological capacity of Euphorbia, in a joint investigation between the UPS and the Jatun Yachay Research Department.

We are sure that you will enjoy this issue of his magazine of Life Sciences, La Granja.

Cordially,

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