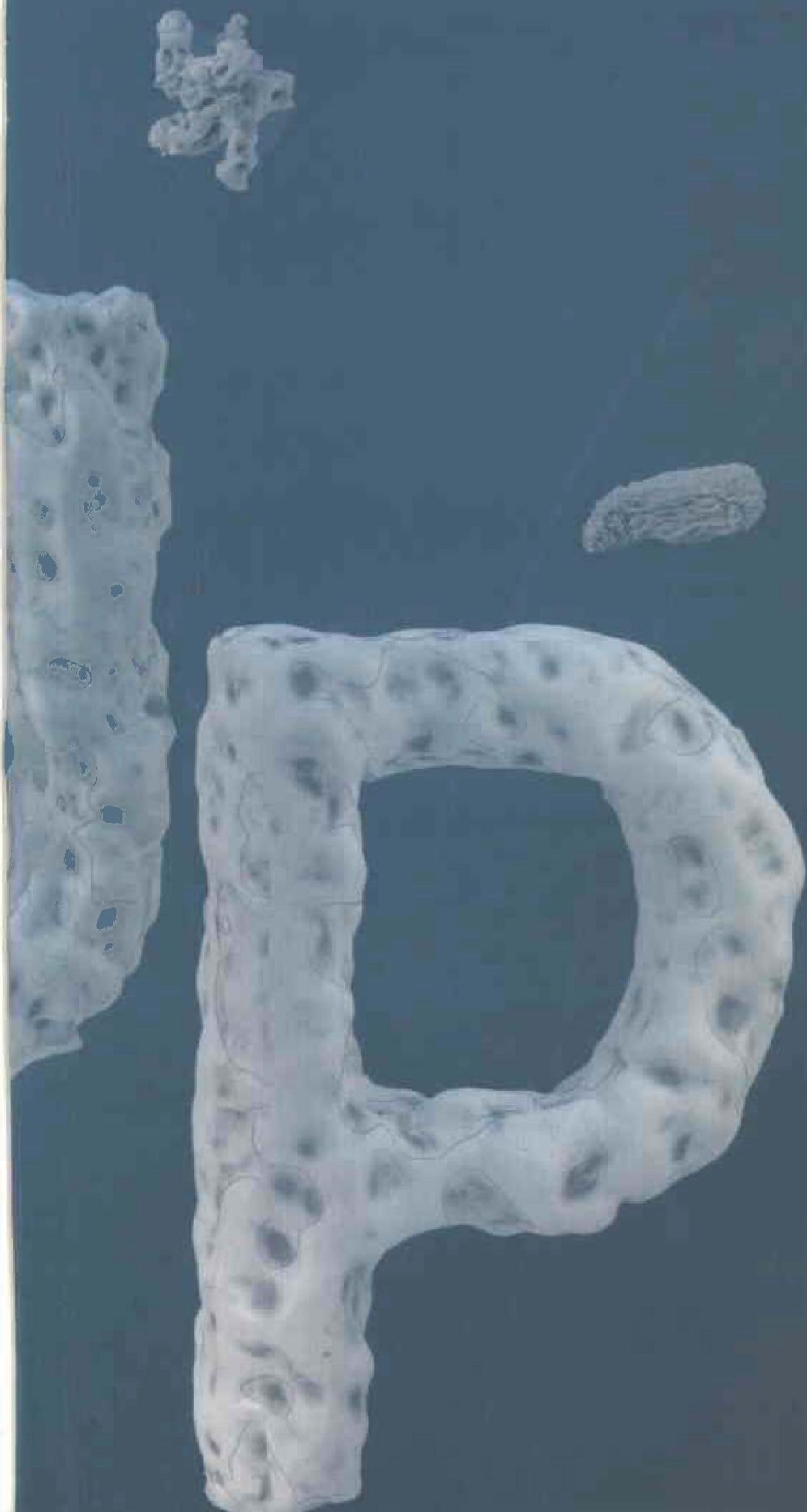


U. PORTO

BOOK OF ABSTRACTS

7TH MEETING
OF YOUNG
RESEARCHERS
OF UNIVERSITY
OF PORTO



Safety concerns regarding Plant Food Supplements

T. Rocha¹, J.S. Amaral^{1,2} and M.B.P.P. Oliveira¹

¹ Department of Chemical Sciences, Faculty of Pharmacy, University of Porto, Portugal.

² ESTiG, Instituto Politécnico de Bragança, Bragança, Portugal.

Introduction: In the last years, plant food supplements (PFS) consumption has been increasing in developed countries, in part reflecting the growing acceptance and use of alternative/traditional medicine but also due to the common idea that PFS are natural products posing no risks to human health. Being legally considered as foods under Directive 2002/46/EC, PFS are under control of the European Food Safety Agency (EFSA) and do not require the same requisites as traditional herbal medicines for legal authorization. In practice, this means that several products are being sold under the umbrella of PSF, being easily available in supermarkets, TV shops and the internet, and not under the supervision and control of the health authorities.

Experimental Description: To perform this review, several bibliographic references from international journals and official agencies documents were consulted, allowing the gathering of sufficient and reliable information supporting the facts presented.

Discussion: The gaps in regulation and guidelines regarding PFS can result in insufficient quality control, therefore allowing the possibility of intentional adulteration of these products [1]. Among the issues that can affect PFS safety, the illegal addition of pharmaceutical substances is of major concern. One of the most popular type of PFS are weight-loss products. Hoping to increase sales, unscrupulous producers can dope PFS with pharmaceutical drugs to provide for quick effects. These drugs can include appetite suppressors (e.g., sibutramin), stimulants (e.g., ephedrine), antidepressants, anxiolytics, diuretics and laxatives (e.g., phenolphthalein) [2]. It should be emphasized that some of these compounds have been banned due to its highly adverse side effects [2,3]. In the last years, the presence of banned appetite suppressors and laxatives have been detected by FDA in the US. Nevertheless, studies regarding this issue in the EU are almost inexistent.

Conclusion: This review highlighted the urgent need for improvement regarding PFS regulation and the need to conduct studies including the development of multitarget methodologies that would allow for the simultaneous screen of several drugs in PFS.

References:

[1] Silano V., Coppens P., Larrañaga-Guetaria A., Minghetti P. and Roth-Ehrang R. (2011). Regulation applicable to plant food supplements and related products in the European Union, *Food & Function*, 2 (2011), 710-719.

[2] Sanzini E., Badea M., Dos Santos A., Restani P. and Sievers H. (2011). Quality control of plant food supplements, *Food & Function*, 2 (2011), 740-746.

[3] Petroczi P., Taylor G., Naughton D.P. (2011). Mission impossible? Regulatory and enforcement issues to safety of dietary supplements, *Food and Chemical Toxicology*, 49 (2011) 393-402.

Acknowledgments: to FCT (PEst-C/EQB/LA0006/2013 and EXPL/DTP-SAP/1438/2013) and QREN (NORTE-07-0124-FEDER-000069-CIÊNCIA DO ALIMENTO)