Development of analytical fingerprints for the quality control of snake venoms’ raw substances

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Snake venoms have been of increasing interest in therapeutic research due to their rich composition in peptides and proteins. Drug formulations containing snake venom strains have already been commercialized mainly in homeopathy. Quality control (QC) of raw materials used in the composition of drugs is required for Good Manufacturing Practices. The high complexity as well as the qualitative and quantitative variations observed between animals of the same species renders snake venoms QC difficult to implement. In this context, we have developed a fingerprint approach combining capillary electrophoresis and chemometrics for the QC of snake venom raw substances. CE is a particularly well suited technique for peptides/proteins separation. Batches of snake venom have been analyzed with many replicates. All results have been processed using several chemometrics approaches (baseline correction, signals alignment, automatic recognition of common peaks) to obtain a representative analytical trace (i.e. electropherogram) that can be used for the quality assessment of future production lots. The poster present results obtained for *Lachesis muta* venom. *Lachesis muta* venom is widely used to treat among others thrombosis and neurological disorders.

Biography

Gaëlle Coussot is Associate Professor at the Faculty of Pharmacy of Montpellier, France. She obtained her PhD in Analytical Chemistry in 2003. She then joined for 15 months the MD Anderson Center Cancer (Houston, Texas) for a Post-doctoral position in proteomic analyses. Currently, her researches focus on the development of bioanalytical methodologies using electrophoretic, chromatographic techniques and immunoassays to characterize and/or quantify proteins and others biopharmaceuticals. Research fields include quality control of biopharmaceuticals and study of antibodies resistance to particular environmental constraints. She has published 1 patent and 14-papers in international analytical and biochemical journals.

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