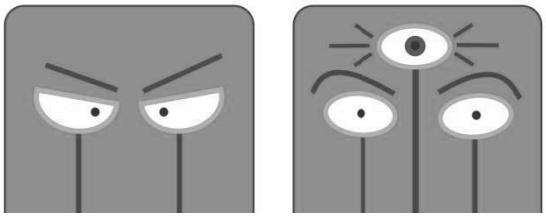
behaviour influenced by two and three electrode setup.



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1Po38
ISOLATION OF TRANS-2,CIS-6-NONADIENAL BY FLASH CHROMATOGRAPHY

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Trans-2,*cis*-6-nonadienal makes up the characteristic aroma of cucumber fruit (Cucumis sativus), released when its tissues are disrupted. It has been found in various plant materials, such as kiwi, mango, cherries, peppers, rice, tea, and several animal products. *Trans*-2,*cis*-6-nonadienal is an important commercial odour used in food products as well as a fragrance in cosmetics, perfumes, and detergents. It has shown potential as a bioactive substance affecting insects, yeast, and certain bacteria [1].

Flash chromatography is a technique used to separate and fractionate the mixtures of compounds. It allows larger sample loads to be separated under more selective separation conditions and avoids column contamination and regeneration difficulties. In this work, technique was employed to separate selected aldehyde components from complex matrix containing alcohols, various acids and their esters, etc.. The plant material containing approx. 30% of natural *trans*-2,*cis*-6-nonadienal was subjected for flash chromatography using two commercially available columns: Biotage® SNAP Ultra 50g (silica) and Biotage® Sfär C18 D 120g. Different gradient solvent systems were used for the separations on each column. All fractions were analysed using GC-FID. Final fractions of *trans*-2,*cis*-6-nonadienal (the purity approx. 60%) were obtained. Both fractionation methods were compared.

This work was supported by the Slovak Research and Development Agency under the contract number APVV-17-0281.

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1Po39
AFFINITY BASED HIGH-THROUGHPUTDETERMINATION OF ABBERANT GLYCOSYLATIONIN CANCER

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Glycosylation being a canonical posttranslation modification in eukaroyotes is a key cellular mechanism regulating several physiological and pathological functions. Abberant glycosylation is one of the characteristic hallmarks of cancer with increased sialylation, increased branched-glycan structures and overexpression of corefucosylation being some of the prominent manifestations. Serum based biomarkers indicative of cancer are the most desirable form of the biomarkers that can be used for personalized daily care in screening, early and rapid diagnosis, establishing prognosis, monitoring treatment, and detecting relapse in cancer patients. However, considering the colossal diversity demonstrated by glycans, high-throughput methods of glycoprofiling are the need of the hour. Glycans and corresponding carbohydrate-binding proteins or lectins prove to be instrumental in high-throughput glycoprofiling by protein-based glycan arrays. Here we demonstrate glycoprofiling of more than 200 patients diagnosed with different types of cancer by adopting microarray and subsequent glycomic approach.

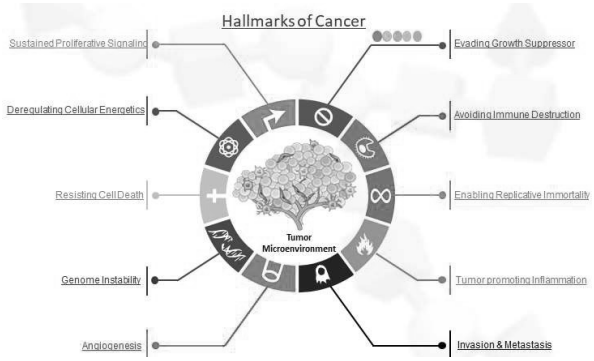

Fig. 1 Hallmarks of Cancer

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1Po40
DETERMINATION OF SELECTED PESTICIDE RESIDUES IN STRAWBERIES USING GC-MS

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Pesticide is a general term that includes a variety of chemical and biological products used to kill or control living organisms such as rodents, insects, fungi and plants (The Pesticides Safety Directorate, UK 2008b). They are used in agriculture to increasing productivity.

Fast GC-MS method for analysis of then GC amenable pesticides active in electron ionization (EI) mode was developed. Extraction of pesticides using QUEChERS method was done and final extracts were analyzed by fast GC-MS. Validation experiments were realized using matrix-matched standard solutions.

Linearity was evaluated using matrix-matched standard solutions at concentration range 0.01-500 µg/kg with coefficients of determination (R^2) higher than 0.9994. Good recoveries at three studied concentration levels (0.005; 0.01 a 0.1ng/µl) from 70 to 120% with relative standard deviation < 20% were obtained for majority of studied pesticides. The limit of detection (LOD) and limit of quantification (LOQ) were evaluated. Good values of LOD and LOQ ranged from 0.00003 to 0.001 ng/µl obtained. The lowest calibration level (LCL) for majority of studied pesticides 0.001 ng/µl was obtained. The developed and validated method was applied for analysis of real samples of strawberries from local supermarket.

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