Simultaneous determination of lercanidipine, benazepril and benazeprilat in plasma by LC–MS/MS and its application to a toxicokinetics study

Original Research Article

Volume 899, Pages 1-168 (15 June 2012)

Wenjing Zhao, Ruichen Guo, Chunmin Wei, Benjie Wang, Xiaoyan Liu, Guiyan Yuan, Rui Zhang, Yingjiang Xu, Xiuhui Tian, Chuanbo Ren, Hui Huang, Xiuzhen Zhang, Xianghong Gong, Huihui Liu, Zhaoqiang Yu, Limin Zhang

Highlights

► Simultaneous determination of LER, BEN and benazeprilat in plasma with single IS. ► The method was fully validated to meet the requirements of FDA and GCP guidelines. ► It can meet the requirement in analyzing large number of samples from clinical trials.

Interference by metabolites and the corresponding troubleshooting during the LC–MS/MS bioanalysis of G004, a bromine-containing hypoglycemic agent

Original Research Article

Pages 8-13

Lihin Hu, Li Ding, Xiaobing Li, Na Zhou, Shuisheng Zhong, Guanzhong Wu, Huibin Zhang

Highlights

► G004, a novel bromine-containing hypoglycemic agent with antithrombosis effect. ► The detection of an interfering metabolite in the LC–MS/MS bioanalysis of G004. ► MS conditions were optimized to eliminate the interference from the metabolite. ► Metabolite-related matrix effect was evaluated by the standard addition method. ► Pharmacokinetics of G004 in beagle dogs was reported for the first time.

Analysis of colistin A and B in fishery products by ultra performance liquid chromatography with positive electrospray ionization tandem mass spectrometry

Original Research Article

Pages 14-20

Yingjiang Xu, Xiuhui Tian, Chuanbo Ren, Hui Huang, Xuixhen Zhang, Xianghong Gong, Huifui Liu, Zhaoyang Yu, Limin Zhang

Highlights

► G004, a novel bromine-containing hypoglycemic agent with antithrombosis effect. ► The detection of an interfering metabolite in the LC–MS/MS bioanalysis of G004. ► MS conditions were optimized to eliminate the interference from the metabolite. ► Metabolite-related matrix effect was evaluated by the standard addition method. ► Pharmacokinetics of G004 in beagle dogs was reported for the first time.
5. An LC–MS/MS method for determination of jujuboside A in rat plasma and its application to pharmacokinetic studies

Changhui Liu, Yingyi Li, Yanhua Zhong, Xiaotao Huang, Xia Zheng, Neng Li, Shaoling He, Suiqing Mi, Ningcheng Wang

Show preview | Related articles | Related reference work articles

Highlights

- It firstly developed a LC–MS/MS method for measurement of jujuboside A in rat plasma.
- The lower limit of quantification (LLOQ) of developed LC–MS/MS method was lower than the previous report.

6. Simultaneous quantification of metronidazole, tinidazole, ornidazole and morinidazole in human saliva

Yongqiang Wang, Peipei Zhang, Ningling Jiang, Xiaojian Gong, Ling Meng, Dewang Wang, Ning Ou, Haibo Zhang

Show preview | Related articles | Related reference work articles

Highlights

- Simultaneous quantification of metronidazole, tinidazole, ornidazole and morinidazole.
- Ornidazole and morinidazole (500 mg) reach more than 4100 ng/ml after i.v. infusion.
- The method is simple, sensitive and specific, with a short analysis time (6 min).
- It was used to find out if those had taken other 5-nitrimidazole derivatives before trial.

7. Determination of the active metabolite of moguisteine in human plasma and urine by LC–ESI-MS method and its application in pharmacokinetic study

Yanni Teng, Haibo Song, Fanlong Bu, Chunmin Wei, Wenjing Zhao, Rui Zhang, Guiyuan Yuan, Xiaoyan Liu, Benjie Wang, Ruichen Guo

Show preview | Related articles | Related reference work articles

Highlights

- It is the first LC–MS method to determine main active metabolite of moguisteine.
- This method is quicker, more accurate and specific than the previous literatures.
- It is the first pharmacokinetic study of moguisteine in healthy Chinese volunteers.


B.Y. Hsu, Y.S. Pu, B. Stephen Inbaraj, B.H. Chen

Show preview | Related articles | Related reference work articles

Highlights

- We develop HPLC–DAD–MS method for analysis of carotenoids in human serum.
- 30 carotenoids are separated within 45 min, identified and quantified.
- Sensitivity, recovery and reproducibility of the developed method are good.
- Method applied to samples from subjects fed with carotenoid-rich capsules.

9. Simultaneous determination of dextromethorphan, dextrophan and doxylamine in human plasma by HPLC coupled to electrospray ionization tandem mass spectrometry: Application to a pharmacokinetic study

J.L. Donato, F. Koizumi, A.S. Pereira, G.D. Mendes, G. De Nucci

Show preview | Related articles | Related reference work articles

Highlights

- HPLC–ESI-MS method to quantify dextromethorphan, dextrophan and doxylamine.
- Method was applied in pharmacokinetic study in human plasma.
- Extraction performed with a simple liquid–liquid extraction.
- High sensitivity, specificity and high throughput.

10. Quechers methodologies as an alternative to solid phase extraction (SPE) for the determination and characterization of residues of cephalosporins in beef muscle using LC–MS/MS


Show preview | Related articles | Related reference work articles

http://www.sciencedirect.com/science/journal/15700232/899

19/7/2555
11 Low-density solvent-based dispersive liquid–liquid microextraction followed by high performance liquid chromatography for determination of warfarin in human plasma

Hoda Ghambari, Mohammadreza Hadjmohammadi

Highlights
► LDS-DLLME presented a high recovery for the extraction of warfarin in human plasma. ► LDS-DLLME–HPLC-UV yielded good sensitivity for warfarin determination. ► Wide linear range of this method can be applied in therapeutic drug monitoring.

12 Optimization and correlation of HPLC-ELSD and HPLC–MS/MS methods for identification and characterization of sophorolipids

Isabel A. Ribeiro, M. Rosário Bronze, Matilde F. Castro, Maria H.L. Ribeiro

Highlights
► TLC, HPLC-ELSD and HPLC–ESI-MS/MS analysis allowed identification of SLs from different sources. ► A [M+Na]+ fragmentation pattern of acidic and lactonic SLs was established. ► For the first time C24:0 monoacetylated and diacetylated SLs were identified.

13 Development and validation of a liquid chromatography–tandem mass spectrometry method for quantification of decitabine in rat plasma

Haiyan Xu, Shaoqiong Iv, Mingxi Qiao, Yao Fu, Xue Jiang, Yi Jin, Chibing Li, Bo Yuan

14 Application of nanoLC–MS/MS to the shotgun proteomic analysis of the nematocyst proteins from jellyfish Stomolophus meleagris

Rongfeng Li, Huahua Yu, Ronge Xing, Song Liu, Yukun Qing, Kecheng Li, Bing Li, Xiangtao Meng, Jinhui Cui, Pengcheng Li

Highlights
► We analyzed the nematocyst proteins of jellyfish Stomolophus meleagris by using the nanoLC–MS/MS with the shotgun proteomic method. ► A total of 181 proteins had been identified with the molecular weight ranging from 5268.06 to 843,487.57 and the pI from 4.49 to 11.39. ► The identified nematocyst proteins were analyzed by bioinformatic method including gene ontology (GO) annotation, pathways and gene network analysis.

15 Click chemistry: A route to designing and preparing pseudo-biospecific immunoadsorbent for IgG adsorption

Xiaoyan Hu, Guangji Li, Ende Huang

Highlights
► Exploring a novel route to a pseudo-biospecific immunoadsorbent – click chemistry. ► Preparing "clickable" reaction modules using l-histidine and original sepharose. ► Click reaction can greatly increase the immobilization efficiency of ligands. ► The 1,2,3-triazole in spacer-arm helps IgG binding without non-specific adsorption. ► The prepared immunoadsorbent exhibits excellent adsorption performance for IgG.

16 Analysis of N′-nitrosonornicotine and its metabolites in rabbit blood with liquid chromatography/tandem mass spectrometric method

Beibei Zhao, Sheng Wang, Juan Wang, Hailei Lang, Shihao Sun, Jian Mao, Jianxun Zhang

Highlights
► We compared SPE and QuEChERS methods to determine seven cephalosporins in cow muscle. ► An experimental design was used to optimize the two clean-up methods. ► The validation of the two methods was done according to the Directive 2002/65/EC. ► The separation and detection of the cephalosporins was carried out by LC–MS/MS. ► Comparable results were found for two methods in terms of quality parameters.
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author(s)</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Biotransformation of flavonols and taxifolin in hepatocyte in vitro systems as determined by liquid chromatography with various stationary phases and electrospray ionization-quadrupole time-of-flight mass spectrometry</td>
<td>Jan Vacek, Barbora Papoušková, Pavel Kosina, Jiří Vrba, Vladimír Křen, Jiřka Ulrichová</td>
<td>Purchase</td>
</tr>
<tr>
<td>18</td>
<td>Design of high productivity antibody capture by protein A chromatography using an integrated experimental and modeling approach</td>
<td>Candy K.S. Ng, Hector Osuna-Sanchez, Eric Valéry, Eva Sørensen, Daniel G. Bracewell</td>
<td>Purchase</td>
</tr>
<tr>
<td>19</td>
<td>Direct pharmacokinetic analysis of puqietinone by in vivo microdialysis sampling and turbulent-flow chromatography coupled with liquid chromatography–mass spectrometry</td>
<td>Gui-Zhong Xin, Liu Cao, Zi-Qi Shi, Hui-Jun Li, Xiao-Dong Wen, Jun Chen, Lian-Wen Qi, Ping Li</td>
<td>Purchase</td>
</tr>
<tr>
<td>20</td>
<td>Bile acid profiling in human biological samples: Comparison of extraction procedures and application to normal and cholestatic patients</td>
<td>Lydie Humbert, Marie Anne Maubert, Claude Wolf, Henri Duboc, Myriam Mahé, Dominique Farabos, Philippe Seksik, Jean Maurice Mallet, Germain Trugnan, Joelle Mesiash, Dominique Rainteau</td>
<td>Purchase</td>
</tr>
<tr>
<td>21</td>
<td>Liquid chromatography coupled to ion trap-tandem mass spectrometry to evaluate juvenile hormone III levels in bee hemolymph from Nosema spp. infected colonies</td>
<td>A.M. Ares, M.J. Nozal, J.L. Bernal, R. Martin-Hernández, M.Higes, J. Bernal</td>
<td>Purchase</td>
</tr>
</tbody>
</table>
Highlights

► JH III was determined in bee hemolymph by LC–MS/MS for the first time. ► The proposed sample treatment was fast and simple. ► A mixture of methanol and phenylthiourea was chosen to dilute bee hemolymph. ► Matrix (bee hemolymph) did not have any influence onto the analyte signal. ► The highest concentration of JH III was found in bees infected with Nosema ceranae.

Short communications

22 Simultaneous determination in hair of multiclass drugs of abuse (including THC) by ultra-high performance liquid chromatography–tandem mass spectrometry

Pages 154-159
D. Di Corcia, F. D’Urso, E. Gerace, A. Salomone, M. Vincenti
Show preview | Supplementary content | Related articles | Related reference work articles

Highlights

► Hair analysis is a tool to evaluate drug exposure in several application fields. ► We present a simple UHPLC–MS/MS method to detect 13 common drugs of abuse in hair. ► The method proved excellent analytical performances and drastic reduction of time. ► High sample throughput is essential for laboratories. ► The increased global productivity makes the workplace testing of hair affordable.

23 Simple, cheap and effective high-performance liquid chromatographic method for determination of praziquantel in bovine muscle

Pages 160-162
Yu Sun, Shi-Jin Bu
Show preview | Related articles | Related reference work articles

Highlights

► This article describes the development of a more sensitive HPLC method for determination of PZQ in bovine muscle for the first time. ► The purpose of this work was to develop a detection method for PZQ residues in bovine muscle. ► This method was validated and used to detect praziquantel residues in a plan survey. ► The work presented here used HPLC with UV detector for the determination of praziquantel following a solid-phase (SPE) extraction. ► The method is specific and sensitive, with a quantification limit of 0.02 mg/kg at and a detection limit of 0.01 mg/kg.

24 Determination of celecoxib in human plasma by liquid chromatography–tandem mass spectrometry

Pages 163-166
Pavel Ptáček, Josef Klíma, Jan Macek
Show preview | Related articles | Related reference work articles

Highlights

► The sample preparation step was simplified using protein precipitation. ► The run time was shortened with a more selective LC–MS/MS procedure. ► Isotopically labeled internal standard was used to improve precision and accuracy. ► A rapid method for determination of celecoxib in human plasma has been developed. ► The method was successfully applied to a pharmacokinetic study.

Erratum


Page 167
Show preview | Related articles | Related reference work articles