

综述

rDNA-ITS序列鉴定深部真菌菌种的研究进展

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摘要: 目前深部真菌病的发生率呈逐渐上升趋势,有关深部真菌菌种的鉴定成为研究热点。由于传统的菌种鉴定方法存在费时及易受实验条件影响等不足,核糖体rDNA-ITS序列分析法已越来越广泛的应用于真菌属内不同种间的系统发育研究中。本文综述了核糖体rDNA-ITS鉴定深部真菌菌种的研究进展,展望了其应用前景。

关键词: ITS区 鉴定 深部真菌

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参考文献:

[1] Enoch DA,Ludlam HA,Brown NM.Invasive fungal infections:a review of epidemiology and management options[J] J Med Microbiol,2006,55(7): 809-818.

[2] White PL,Archer AE,Barnes RA.Comparison of non-culture-based methods for detection of systemic fungal infections,with an emphasis on invasive Candida infections[J] J Clin Microbiol,2005,43(5): 2181-2187.

[3] Schwarz P,Bretagne S,Gantier JC,Molecular identification of zygomycetes from culture and experimentally infected tissues[J] J Clin Microbiol,2006,44(2): 340-349.

[4] Manish K,Shulda PK.Use of PCR targeting of internal transcribed spacer regions an single-stranded conformation polymorphism analysis of sequence variation in different regions of rRNA genes in fungi for rapid diagnosis of mycotic keratitis[J] J Clin Microbiol,2005,43(2): 662-668.

[5] Bellemain E,Carlsen T,Brochmann C,ITS as an environmental DNA barcode for fungi:an in silico approach reveals potential PCR biases[J] BMC Microbiol,2010,10(5): 189.

[6] Daniele C,Arianna T,Fedefica G,DNA microarray based on arrayed-primer extension technique for identification of pathogenic fungi responsible for invasive and superficial mycoses[J] J Clin Microbiol,2008,46(3): 909-915.

[7] Makino H,Fujimoto J,Watanabe K.Development and evaluation of a real-time quantitative PCR assay for detection and enumeration of yeasts of publichealth interest in dairy products[J] Int J Food Microbiol,2010,140(1): 76-83.

[8] Francesca T,Elena F,Panla P,Exploring the diversity of the bifidobacterial population in thehuman intestinal tract[J] Applied and Environment Microbiology,2009,75 (6): 1534-1545.

[9] Li HC,Bouchara JP,Hsu MM,Identification of dermatophytes by an oligonucleotide array[J] J Clin Microbiol,2007,45 (10): 3160-3166.

[10] Pablo A,Jose L Selection of enzymes for terminal restriction fragment length polymorphism analysis of fungal internally transcribed spacer sequences[J] Applied and Environment Microbiology,2009,75(14): 4747-4752.

[11] Prasanna D,Daisy L,David N.Sequencing and analysis of fungal rRNA operons for development of broad-range fungal

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PER assays[J] Appl Environ Microbiol,2009,75(6): 1559-1565.

[12] Bobby L,Boyanton,Ruth Ann Luna,DNA pyrosequencingbased identification of pathogenic Candida species by using the internal transcribed spacer 2 region[J] Archives of Pathology & Laboratory Medicine,2008,132(4):667-674.

[13] Adam H,Groenewald M,Mohan S. Identification of a new species,Candida subhashii,as a cause of peritonitis[J] Med Mycol,2009,47(3): 305-311.

[14] Yong PV,Chong PP,Lau LY,Molecular identification of Candida orthopsilesis isolated from blood culture[J] Mycopathologia,2008,165(2):81-87.

[15] Travis Henry,Peter C,StevenH,Identification of Aspergillus species using internal transcribed spacer regions 1 and 2[J] J Clin Microbiol,2000,38(4): 1510-1515.

[16] Hans P,Steven F,Timothy J,Assessment of ribosomal large-subunit D1-D2,internal transcribed spacer 1,and internal transcribed spacer 2 regions as targets for molecular identification of medically important Aspergillns specias[J] J Clin Microbiol,2005,43(5):2092-2103.

[17] Masakazu K,Sarah K,Akikazu A,The internal transcribed spacers and 5.8S rRNA gene show extensive diversity among isolates of the Cryptococcus neoformans species complex[J] FEMS Yeast Research,2004,4(4): 377-388.

[18] Watanabe S,Kawasaki M,Mochizuki T,RFLP analysis of the internal transcribed spacer regions of Sporothrix sehenckii [J] Nippon Ishinkin Gakkai Zasshi,2004,45(3): 165-175.

[19] 王英,顾军,刘维达.用内转录间隔区通用引物的聚合酶链反应快速测定念珠菌菌种[J] 临床皮肤科杂志,2003,32:69-71.

[20] 骆志成,王端礼,李若瑜,等.烟曲霉rRNA基因ITS区的克隆测序分析[J] 菌物系统,2000,19:336-341.

[21] 窦红涛,李若瑜,万喆,等.临床常见镰刀菌的鉴别[J] 中国真菌学杂志,2008,3(5):276-279.

[22] 王永晨,王连明,路娟.应用特异性引物鉴定人申克孢子丝菌感染[J] 中国试验诊断学,2009,13:1504-1507.

[23] 陈敏,廖万清,吴绍熙,等.新生隐球菌变种间ITS序列差异的研究[J] 中华皮肤科杂志,2007,40:230-233.

[24] Hay RJ,Jones RM.New molecular tools in the diagnosis of superficial fungal infections[J] Clin Dermatol,2010,28(2):190-196.

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1. 冯欣伟,陈萍.伏立康唑治疗深部真菌感染的观察及护理[J].中国真菌学杂志,2012,7(1):27-28
2. 高露娟,余进,李若瑜.烟曲霉再鉴定、标准化CSP分型及体外药物敏感性[J].中国真菌学杂志,2011,6(6):328-331,336
3. 赵正娟,田伟,赵敬军.DNA序列分析用于常见致病真菌鉴定和分型[J].中国真菌学杂志,2011,6(5):316-320
4. 赵正娟,田伟,赵敬军.DNA序列分析用于常见致病真菌鉴定和分型[J].中国真菌学杂志,0,():316-320
5. 杨惠琴,梅亚宁.血浆(1,3)- β -D-葡聚糖对深部真菌感染诊断的临床意义[J].中国真菌学杂志,2011,6(3):136-140
6. 陈柏毅,李若瑜.须癣毛癣菌分类进展[J].中国真菌学杂志,2011,6(1):51-56
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8. 李著,孙坚,邓杰,杨国栋.腹部大手术后深部真菌感染的临床与真菌学分析[J].中国真菌学杂志,2010,5(5):286-288
9. 郑树茂,王华,朱敬先,林元珠,高顺强.应用RAPD技术鉴定地霉的实验研究[J].中国真菌学杂志,2010,5(4):210-213
10. 高露娟,余进,李若瑜.中国大陆地区曲霉病流行现状分析[J].中国真菌学杂志,2010,5(4):247-251
11. 鲁巧云,余进,刘伟,杨建勋,马蕾,李若瑜.FTA-DNA直接提取法在病原真菌分子鉴定中的应用[J].中国真菌学杂志,2010,5(3):137-140
12. 姜红浩,张宏,余国荣,张敬文,张丁.1950~2007年中国深部真菌病历史地理学研究[J].中国真菌学杂志,2010,5(3):148-153
13. 阙冬梅,覃巍,张军民.马尔尼菲青霉的分子生物学研究进展[J].中国真菌学杂志,2010,5(3):188-192
14. 张晓利,吕雪莲,沈永年,吕桂霞,王淼淼,葛一平,刘维达.PCR-RFLP和多重PCR技术检测常见病原性丝状真菌的实验研究[J].中国真菌学杂志,2010,5(2):105-108
15. 帕丽达·阿布拉孜,Takashi Yaguchi,罗德梅,惠艳,Katsuhiro Kamei,Kazuko Nishimura.多育赛多孢菌性鼻窦炎1例——致病菌的鉴定和体外抗真菌药物敏感性研究[J].中国真菌学杂志,2010,5(1):1-4