

我国药用地衣研究概况

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地衣植物是真菌和藻类共生的一类独特植物,药用历史悠久。地衣植物对环境污染敏感,多分布于高海拔无污染地区,且分类定种困难,是中草药研究的薄弱环节。随着人类活动范围扩大,地衣植物种类,资源量减少速度比高等植物快得多,据国外研究报道,地衣植物在抗菌、抗结核、抗癌和抗原子能辐射都有一定作用,今概述国产地衣植物的研究现状。

1 药用地衣资源

魏江春等著《中国药用地衣》[1]收载71种药用地衣,包括民间药用的地衣植物、含有抗菌物质及其它药用成分的地衣植物以及可做石蕊试剂原料的地衣植物。陕西部分地区有商品生产销售,中南、西北地区将数种松萝属植物做海风藤或松萝入药。

2 化学成分

2.1 挥发油:孙汉董[2]等从扁枝衣*Evernia mesomorpha*中分离鉴定了20余种成分,主要成分为柔扁枝衣酸乙酯;从尼泊尔星冰岛衣*Cetraria nepalensis*中分离鉴定了30余种成分,主要成分为赤星衣酸乙酯、扁枝衣酸乙酯和柔扁枝衣酸乙酯。

2.2 地衣酸类:a)石耳科:张振杰[3]等报道了石耳科石耳*Umbilicaria esculenta*的化学成分,分离鉴定了石耳酸、红粉苔酸、苔色酸甲酯;李波[4]等从红腹石耳*Umbilicaria hypococcinea*中分离鉴定了三苔色酸、黑茶渍素、苔色酸甲酯和乙酯、苔色酸、 β -苔黑酚酸甲酯及松萝酸。b)松萝科:孙汉董[6]等从亚洲树发*Alectoria asiatica*中分离鉴定了松萝酸,从沟树发*Alectoria sulcata*中分离鉴定了维壬西酸、赤星衣酸乙酯、瑞藏酸、赤星衣酸;从砖孢发*Crotopogon loxensis*中分离鉴定了黑茶渍素和维壬西酸;从长松萝*Usnea longissima*中分离鉴定了松萝酸和扁枝衣酸乙酯;从胡子松萝*Usnea comosa*中分离鉴定了松萝酸。c)石蕊科:孙汉董[5]等从林石蕊*Cladonia arbuscula*中分离鉴定了松萝酸、赤星衣酸乙酯;孙汉董[6]等又从雀石蕊*Cladonia stellaris*中分离鉴定

了黑茶渍素、松萝酸、珠光酸、2-羟基-4-甲氧基- α -正戊基苯甲酸、2,4-二羟基-6-正戊基苯甲酸。

d)梅衣科:孙汉董[6]等从金腰带*Lethariella zahlbruckneri*中分离鉴定了黑茶渍素、 β -苔黑酚酸甲酯、赤星衣酸乙酯及桔红色素;从金丝刷*Lethariella cladonioides*中分离鉴定了黑茶渍素、降斑点酸、 β -苔黑酚酸甲酯、赤星衣酸、8-乙氧基降斑点酸。e)蜈蚣衣科:孙汉董[5]等从卷梢雪花衣*Anaptychia boryi*中分离鉴定了黑茶渍素、赤星衣酸乙酯、瑞藏酸和泽屋菇。f)皮果衣科:孙汉董[6]等从皮果衣*Dermatocarpon miniatum*中分离鉴定了庚七醇。

3 讨论

3.1 我国地衣资源丰富,但鉴定主要依据子囊盘特征难以掌握,限制其研究及使用。建议结合地衣植物经典分类方法,从地衣体的显微构造及粉末特征,地衣酸微量结晶晶形及薄层层析等方面进行研究,提供准确、快速、简易方法鉴别地衣植物。

3.2 据初步统计,国产地衣植物仅2种进行挥发油成分分析,15种进行了地衣酸的分离鉴定。所占药用地衣总数比例很小,而且具抗癌活性的地衣多糖在国产种中未见报道。为了进一步开发药用地衣资源,必须加强化学成分的研究,同时也为薄层层析鉴别地衣植物奠定基础。

4 我国药用地衣应用前景展望

4.1 我国地衣资源丰富,地衣酸含量较高,有的种类高达23.5%,约80%的地衣植物含有多糖类物质,且多生长于高海拔无污染地区,民间有长期药用经验。开发无污染、疗效高的绿色药品、保健品有广阔前景。

4.2 某些地衣植物是传统食品之一,食用历史悠久,加强其食用价值研究,生产符合饮料发展新潮流的营养保健型饮料、食品有一定开发价值。

4.3 某些地衣植物含有独特的芳香物质,用于高级香水的配制,在国外已有生产。在国产地衣植物中寻找新资源。将会有可观的经济价值。

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Quantitative Analysis of Oleanolic Acid from the Fruits of Glossy Privet (*Ligustrum lucidum*) in Different Growing Periods

Mi Hemin, Cao Yongbing, Song Hongtao

By means of TLC-densitometry, the contents of oleanolic acid extracted from the fruits of *Ligustrum lucidum* were determined to be 8.04% (g/g) in the unripened fruit collected in August and 2.73% (g/g) in ripened fruit gathered in December.

This result showed that the oleanolic acid content in fructus *L. lucidum* decreases gradually with growing until the fruit is fully ripened.

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A Preliminary Study on Cultivation Test of Protoplast Fusion Strain of Fulin (*Poria cocos*)

Zhu Quandi, Tang Ronghua, Cheng Xiaoyu

Result of field cultivation test by protoplasmic fusion technique for biological engineering breeding of *Poria cocos* in Huoshan county, Anhui Province was reported for the first time. A fusion strain F_1 was obtained from parents P_1 , P_{578} by separation, fusion, marker of hypha protoplast and identification of recombinant. It was cultivated simultaneously with P_1 , P_{578} for comparison. Results showed that the average cellular outputs were 1.73, 0.5 and 2.20kg respectively. As the output of strain F_1 is intermediate between its parent P_1 and P_{578} , the result is considered to be unsatisfactory. The reason for such result was discussed.

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Bencaological Studies on Changpu

Wang Wen, Xu Jingdong, et al

Result of Bencaological studies on Changpu showed that it originated from two different sources, one is Shuichangpu (*Acorus calamus*) while another is Shichangpu (*A. tatarinowii* and *A. gramineus*). Usually, Changpu grown on stony ground was referred to as Shichangpu. Jujiechangpu is a kind of Changpu with 9 nodal rings within an "inch" on its root stock, but that which is used in Northwest China is an entirely different herb *Anemone altaica*.

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