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UNANI CONCEPT OF PYREXIA AND SOME IMPORTANT ANTI-PYRETIC DRUGS

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ABSTRACT

In Persian, Fever is called *Tap* and in common Indian language it is called as *Bukhar*. Pyrexia is an abnormal temperature which itself produced in the heart or it may develop in any other organ then transferred to the heart and from heart it is distributed in the whole body via *Rooh* and blood. In the body, this abnormal temperature interferes with normal functions and disrupts them. In Unani system of Medicine, wide description is available about the fever and drugs are also mentioned which have anti-pyretic activity. An attempt has been made to cumulate the anti-pyretic drugs which are mentioned in classical Unani text.

INTRODUCTION

In Persian, Fever is called **Tap** and in common Indian language it is called as **Bukhar**.^{2,7}

Pyrexia is an abnormal temperature which itself produced in the heart or it may develop in any other organ then transferred to the heart and from heart it is distributed in the whole body via **Rooh** and blood. In the body this abnormal temperature interferes with normal functions and disrupt them.^{1, 2,7}

Fever is an abnormal temperature which produced from the heart, distributed in the whole body and heat up the whole body.⁶

TYPES OF TEMPERATURE IN UNANI SYSTEM⁷

There are three types of temperatures discussed in Unani system of medicine which are as follows:

- (1) **Hararat-E-Ghareezi (Normal Temperature):** This type of temperature resides in the body up to its living state.
- (2) **Hararat-E-Ustuqussi (Core Temperature):** This type of temperature persists in the body up to its complete destruction. Because of this temperature the dead body become sblack and decomposed.
- (3) **Hararat-e-Ghareebi (Abnormal Temperature):** This temperature develops in the living body and produce discomfort in it.

CLASSIFICATION OF FEVER OR PYREXIA

According to *GALEN*, there are two types of pyrexia^{2,5,7}

- (1) **Humma-e-Marzi (Pyrexia of Disease):** There is no involvement of any other disease. The fever is itself a disease.
- (2) **Humma-e-Arazi (Pyrexia of Complication):** It is always due to some disease in the body. It develops as a complication of that disease.

Most of the Unani scholars later divided fever into three types^{2,7}

- (1) **Humma-e-Yaum (Single Day Fever):** ^{3, 6} This type of fever persist only for one day. It has a single episode throughout the day. It does not start with chills and rigors.
- (2) **Humma-e-Khilti Or Ufooni (Septic Fever):** If the abnormal temperature first affect **humors** then involves the whole body, it is septic fever.
- (3) **Humma-e-Diqqi (Tubercular Fever):** ^{3,6} In this type of fever, the abnormal temperature first affect the **organs**.

CLASSIFICATION ACCORDING TO THE NATURE OF FEVER^{2,3, 4, 5}

- (1) **Humma-e-Daima or Lazima:** This type of fever persist for the whole duration of the disease and does not come to normal from begining to end. It includes-
 - (i) Humma-e-yaum
 - (ii) Humma-e-mutbiqa.
- (2) **Humma-e-Naiba or Dairah:** This is periodic in nature. It includes:

- (i) Humma-e-mawaziba
- (ii) Ghib-e-dairah
- (iii) Ruba-e-dairah.

(3) Humma-e-Mufattirah: In this type of fever there is remarkable decrease in the temperature but the fever does not subside completely. It includes:

- (i) Humma-e-lisqa,
- (ii) Ghib-e-lazima
- (iii) Ruba-e-lazima.

MADARIJ-E-HUMMA (STAGES OF FEVER) ^{1, 4, 7}

There are four stages described in Unani system of medicine

- (1) Darja-e-Ibtida
- (2) Darja-e-Tazaeed
- (3) Darja-e-Inteha
- (4) Darja-e-Inhetat

ANTIPYRETIC DRUGS

Those drugs which are used to lower the raised body temperature i.e. fever are known as antipyretic drugs. Broadly these may be divided as:

- (1) **Weak antipyretics** act upon the thermoregulatory centre and decrease the abnormal temperature slowly.
- (2) **Strong antipyretics** act upon thermoregulatory centre and constrict the blood vessels or sometimes increase the perspiration and decrease the abnormal temperature quickly.

Regarding fever there are some important points which should be kept in mind and used at the time of requirement.

MODES OF ACTIONS OF ANTIPYRECTICS

Antipyretics work in following manner as described in Unani system of medicine.⁴

- (1) **Tal'een (Laxation)** Due to constipation there may be decrease in excretion of heat from the body. In this condition one can use laxatives to subside the increased temperature.
- (2) **Tareeq (Perspiration)** It is necessary to maintain the balance in temperature. With the help of perspiration the temperature can be reduced and maintained to normal level.
- (3) **Idrar (Diuresis)** By increasing the excretion of urine, we may reduce the abnormally increased temperature easily.
- (4) **Qai (Vomiting)** This is used to maintain the temperature when the body tries to expel through mouth.
- (5) **Tabreed (Cooling)** We may also reduce temperature by directly using those drugs which have cooling effect either externally or internally.

Those drugs which are given for tal'een, tareeq, idrar, qai and sometimes for purgation, not only reduce the temperature but also excrete the toxins from the body which cause fever. In this way these drugs act as antipyretics.⁴

SOME ANTIPYRETIC DRUGS USED IN UNANI SYSTEM OF MEDICINE

S. No.	Unani Name	Botanical Name	Alternative Name	Part Used	Chemical Constituents
1.	Khaksi ^{8,9,10,11,12,13,15,18}	<i>Sisymbrium irio</i> ^{9,10,11,13,14,15,18}	Khoobah ^{11,15} , Khoobkalan ^{8,9,10,11,12,13,15,18}	Seeds ^{9,11,12,13,15,18}	Fixed oil ¹⁰ , Mucilage ¹⁰ , Carbohydrate ^{10,18} , Manganese ¹⁰ , Sterol ¹⁰ , Quercitin ¹⁴ , Isorhamentin ^{14,18}
2.	Giloe ^{8,10,11,12,13,15}	<i>Tinospora cardifolia</i> ^{10,11,13,14,15}	Gurach ^{8,10,12,15} , Gulancha ^{10,12,13,15}	Stem ^{10,12,13,15}	Starch ¹⁰ , Giloin ¹³ , Giloinin ¹³ , Berberine ¹³ , Tinosporide ¹⁴
3.	Karanjwah ^{8,9,10,11,12,13,15,17}	<i>Caisalpinia bonducella</i> ^{11,13,15,16,17,18}	Akitamakit ^{8,9,10,11,12,15} Khaya- e-Iblees ^{8,9,10,12}	Seeds ^{9,10,11,12,13,15,16,17}	Bindocylone ^{11,12} , Fixed oil ^{10,17,18} , Mucilage ^{10,17} , Starch ^{13,17} , Saponin ^{13,17} , Bonducin ^{13,17}
4.	Badaaward ^{8,9,10,11,12}	<i>Fagonia arabica</i> ^{9,10,11,13,18}	Shokat-ul-baiza ^{8,9,10,11,12} Dhamasa ^{10,11,13,18}	Whole plant ^{10,13,18}	Fixed oil(green) ⁹ , Salts ^{9,10} , Volatile oil ¹⁰
5.	Shukai ^{8,10,12,13,18}	<i>Volutarella divericata</i> ^{10,13,14,18}	Hafiz-ul-ajsaad ¹⁰	Whole shrub ^{10,18}	Volatile oil ¹⁰ , Salts ¹⁰ , Mucilage ¹⁰ , Cycloartenol ¹⁴
6.	Afsanteen ^{10,11,12,13,15,17,18}	<i>Artemisia absinthium</i> ^{11,13,14,15,17,18}	Sitara ^{10,12} , Majri ^{10,12} , Naag ramni ^{10,12}	Leaves ¹²	Volatile oil ^{10,11,12,13,18} , Absinthol ¹⁹ , Absinthin ^{13,14,18} , Iron ^{11,12} , Felodrine ¹⁰ , Vit-C ¹⁰ , Kaempferol ¹⁴ , Artanolide ¹⁴
7.	Sinkona ^{10,13,17}	<i>Cinchona officinalis</i> ^{10,13,14,17,18}	Jodtodak ¹⁰ , Kena kena ¹⁰	Bark ^{10,17,18}	Cinchonine ^{10,17,18} , Cincholine ¹⁰ , Quinine ^{10,13,17,18} , Hydroquinine ¹⁰ , Quinine acid ¹⁰ , Avicularin ^{14,17,18}
8.	Charaita ^{8,9,10,11,12,13,15,16,18}	<i>Swertia chirata</i> ^{10,11,13,14,15,16,18}	Qasbat-ul-zareerah ^{9,10,12,15} , Kali maig ^{9,10,12}	Whole plant ^{11,13,15,16,18}	Ophelic acid ^{9,11,13,16,18} , Glucoside ⁹ , Resin ^{9,10} , Pot.carbonate ^{9,10,11} , Pot. phosphate ^{9,10} , Magnesium ⁹ , Tannic acid ⁹ , NaCl ⁹ , Chiratin ^{13,18} , Swertanone ^{14,16} , Chiritol ^{14,16} , Kairatenol ^{14,16} , Pichierenol ^{14,16}
9.	Shahtara ^{8,9,10,11,12,15,18}	<i>Fumeria officinalis</i> ^{11,13,14,18}	Shahtara ^{8,9,10,11,12,15} , Pit papda ^{8,9,11,13,15,18}	Leaves ¹¹ , Flowers ¹¹	Fumeric acid ^{10,11,12,14} , Fumerine ^{10,11,12,13} , Corydaline ¹⁴

					Malic acid ¹⁴ , Cryptopine ¹⁴
10.	Atees ^{9,10,11,12,13,17,18}	<i>Aconitum heterophyllum</i> ^{9,10,11,13,14,17,18}	Patees ^{9,10,12,17,18} , Shirangi ^{9,10,12}	Root ^{9,10,11,13,16}	Aconite acid ^{9,10,11,12} , Atisine ^{9,10,11,12,13,14,17,18} , Fixed oil ¹⁰ , Hetisine ^{13,14,17}
11.	Baranjasif ^{8,9,10,11,12,17}	<i>Artemisia vulgaris</i> ^{10,11,13,14,17,18}	Shavela ^{8,9,10,12} , Gomaad ^{9,10}	Whole plant ^{11,13,17}	Volatile oil ^{9,10,13,17} , Eunchiline ¹⁰ , Quebrachitol ^{14,17}
12.	Aalu bukhara ^{8,9,10,11,12,13,16,18}	<i>Prunus domestica</i> ^{10,11,13,14,16,18}	Ajjas ^{8,9,10,11,12} , Aalucha ^{10,18}	Fruit ^{10,13,16,18}	Protein ^{9,10,11,12,16,18} , Fat ^{9,11,12,18} , Sugar ^{9,11,12,14,16,18} , Calcium ^{9,10,11,12,18} , Phosphorus ^{9,10,11,12,18} , Vit-C ^{10,18} , Iron ^{10,18} , Fixed oil ¹⁰ , Isosakuranetin ^{14,16} , Prudomestin ^{14,18} , Naringenin ^{14,16}
13.	Imli ^{8,9,10,11,12,13,15,16,18}	<i>Tamaridus indica</i> ^{9,10,11,13,15,16,18}	Tamar hindi ^{8,9,10,11,12,15} , Amlika ^{9,10,12,13,16}	Pulp ^{9,10,11,12,15,16,18} , Seeds ^{9,10,11,12,15,16,18} , Leaves ^{9,15,16}	Tartric acid ^{9,10,11,12,18} , Tartrate of Potassium ^{9,10,11,12} , Citric acid ^{9,10,11,12,18} , Oxalic acid ^{13,18} , Glucose ^{9,11,12,14,18} , Fixed oil ^{9,18} , Tamerindial ¹⁴
14.	Angoor ^{8,9,11,12,13,15,16,18}	<i>Vitis vinifera</i> ^{11,13,14,15,16,18}	Inab ^{8,9,11,12,15}	Fruit ^{11,13,15,16,18}	Carbohydrate ^{9,18} , Proteins ^{9,18} , Vit-A ⁹ , Vit-C ⁹ , Calcium ⁹ , Iron ⁹ , Tartric acid ^{9,13,18} , Resin ⁹ , Malic acid ^{9,13,16,18} , Acuminoside ¹⁴ , Zeatin ¹⁴ , Catechin ^{14,16,18} , Oxalic acid ¹³
15.	Baboona ^{8,9,10,11,12,13,15,18}	<i>Maticaria chamomila</i> ^{9,10,11,13,14,15,18}	Baboonaj ^{8,9,10,11,12} , Marhi ^{9,10,12}	Root ^{9,11,12,15} , Flowers ^{9,10,11,12,13,15,18}	Azulene ^{9,10} , Anthemene ^{9,10} , Anthemenic acid ⁹ , Tensin ⁹ , Volatile oil ^{10,11,18} , Salicylic acid ^{11,13} , Apigenin ^{11,13,14,18} , Chamazulene ^{13,14,18}
16.	Arjun ^{10,11,12,13,15,16,18}	<i>Terminalia arjuna</i> ^{10,11,13,14,15,16,18}	Balrath ¹⁰ , Viru rkshak ¹⁰	Bark ^{10,11,12,13,15,16,18}	Calcium carbonate ^{10,11,12} , Tannin ^{10,11,12,13,14,18} , Sodium ¹⁰ , Arjunolitin ¹⁴ , Arjunine ¹³ , Arjunetine ^{13,14,16}

17.	Braham dandi ¹²	<i>Echinops echinatus</i> ^{13,14,17}	Lubh ¹² , Tal kantu ¹²	Every part of herb ^{13,17}	Berberine ²⁰ , Protopine ²⁰ , Taraxesterol ^{14,17} , Lupeol ^{14,17} , Beta-amyrin ^{14,17} , Apigenin ^{14,17} , Echinacin ^{14,17} , Echinatin ^{14,17}
18.	Aspaghol ^{8,9,10,11,12,13,15,18}	<i>Plantago ovata</i> ^{9,10,11,13,15,18}	Bazar-e-qatoona ^{8,9,10,11,12,15} , Samogul ^{9,12,15}	Seeds ^{9,10,12,13,15,18} , husk ^{9,10,12,15,18}	Mucilage ^{9,10,11,12,13,18} , Fatty acid ^{9,10,11,12,18} , Albumin ⁹ , Cellulose ¹⁰ , Aucubin ¹⁸ , Lilonic acid ²¹
19.	Ispand ^{8,9,10,11,12,13,15}	<i>Peganum harmala</i> ^{9,10,11,13,14,15,16,18}	Harmal ^{8,9,10,11,12,13,15,16,18} , Harmaru ^{9,12,15}	Seeds ^{10,11,12,13,15,16,18}	Harmin ^{9,11,13,14,16,18} , Harmalin ^{9,11,12,13,16,18} , Harmalol ^{9,11,12,13,16,18} , Fixed oil ^{9,10} , Tannin ¹⁰ , Peganine ^{13,14,16}
20.	Bhang ^{8,9,10,11,12,13,17,18}	<i>Cannabis sativa</i> ^{10,11,13,14,17,18}	Qinnab ^{8,10,11,12} , Falak sair ^{9,11} , Hasheesh ^{9,10,12} , Waraq-ul- khyal ^{9,10,12} , Shehdana ¹¹	Leaves ^{11,17} , Seeds ¹⁷ , Flowers ¹⁷	Cannabinol ^{9,10,11,12,13,14,17,18} , Cannabol ^{9,11,12,13,18} , Canine ^{9,10,11,12,13} , Cannabediol ^{9,10,11,12,13,14,17,18} , Volatile oil ^{9,11,12} , Calcium carbonate ^{9,10,11,12}
13	Palak ^{8,9,10,11,12,13,15,18}	<i>Spinacia oleracea</i> ^{10,11,13,14,15,18}	Asfanakh ^{8,9,10,11,12,18} , Palam saag ^{10,12}	Seeds ^{10,11,13,1,185} , Saag ^{11,12}	Water ^{9,18} , Protein ^{9,10,18} , Carbohydrate ^{9,10,18} , Iodine ^{13,18} , Lecithin ^{13,18} , Carotin ^{13,18} , Calcium ^{9,10,11,12,18} , Phosphorus ^{9,10,18} , Iron ^{9,10,11,12,18} , Vit-A ^{9,18} , Vit-C ^{9,10,18} , Nitrates ^{9,10,18} , Sugar ⁹ , Rutin ^{14,18} , Hyperoside ¹⁴ , Astragalin ¹⁴
22.	Parsiyaushan ^{10,11,12}	<i>Adiantum capillus</i> ^{10,11,13,14,15,17,18}	Hansraj ^{10,11,12,13,15,17,18} , Shar- ul-jinn ^{10,11,15}	Whole plant ^{10,11,12,15,17,18}	Nitrogen ¹⁰ , Carbon ¹⁰ , Calcium ¹⁰ , Magnesium ¹⁰ , Sulphur ¹⁰ , Salt ¹⁰ , Beta-sitosterol ¹⁴ , Stigmasterol ¹⁴ , Campesterol ¹⁴
23.	Tarbooz ^{8,10,11,12,13,15,18}	<i>Citrullus vulgaris</i> ^{10,11,13,14,15,17,18}	Bittikh ^{8,10,12} , Hindudana ^{8,10,12,15} , Tarbaj ¹⁰	Seeds ^{10,12,13,15}	Carbohydrate ^{17,18} , Sugar ^{10,11,12,18} , Fat ^{11,12,17,18} , Protein ^{11,12,14,17,18} , oil ^{10,11,12,13,17} , Pectin ^{11,12,13,18}

					Water ¹⁰ , Vit-A ^{10,17,18} , Vit-C ^{10,17,18} , Vit-B ₁₂ ¹⁰
24.	Chobchini ^{9,10,11,12,13,18}	<i>Smilex china</i> ^{9,10,11,13,14,18}	Khsab-ul-gheeni ¹²	Root ^{10,11,12,13}	Sugar ^{9,10} , Glycosides ^{9,10,14} , Saponin ^{9,10,11,12,13,18} , Resin ^{9,10,18} , Starch ^{9,10} , Manganese ¹⁰ , Smilaxin ¹⁴
25.	Khurfa ^{8,9,11,12,13,15}	<i>Portulaca oleracea</i> ^{11,13,14,15,18}	Rijla ¹¹ , Kalfa ^{9,13,15,18} , Bazar-ul-hamqa ¹²	Seeds ^{11,12,13,15} , Leaves ^{11,15}	Potassium oxalate ⁹ , Mucilage ^{9,14} , Protein ^{11,12,18} , Starch ^{11,12} , Calcium ^{11,12,18} , Magnesium ^{11,12,18} , Phosphorus ^{11,12,18} , Oxalic acid ¹² , Copper ^{11,12,18} , Vit-A ^{11,12,18} , Vit-C ^{11,12,18}
26.	Rehan ^{8,9,10,11}	<i>Ocimum sanctam</i> ^{9,11,13,14,15,18}	Tulsi ^{8,9,10,11,13,15,18} , Faranjmushk ¹⁰ , Shahsafram ^{8,9,10}	Seeds ^{11,13,15,18} , Leaves ^{11,13,15,18}	Volatile oil ^{9,10,11,13,18} , Vit-C ¹⁸ , Ursolic acid ¹⁴ , Caryophyllene ^{13,14} , Eugenol ^{13,14,18} , Gallic acid ¹⁴ , Vanillic acid ¹⁴
27.	Zarishk ^{9,11,12}	<i>Berberis vulgaris</i> ^{9,11,13,14,16}	Dar-e-hald(Bark) ^{9,11,12} , Rasaut(Extract) ^{9,11,12}	Fruit ^{11,16} , Bark ^{11,13,16}	Barberine ^{11,12,13,14} , Oxicantine ^{11,12,13} , Berbamine ^{13,14,16} , Yuziphine ¹⁴ , Palmatine ¹⁴ , Lambertine ¹⁴
28.	Tabasheer ^{8,10,11,12,13,15,16,18}	<i>Bambusa arundinacea</i> ^{10,11,13,14,15,16,18}	Bansilochan ^{8,10,11,12,13,18} , Bans Kapoor ^{10,12}	White exudate ^{11,12,13,15,16}	Salicylic acid ¹⁰ , Iron peroxide ^{10,11,12} , Potash ^{10,11,12} , Lime ^{10,11,12} , Cholin ^{13,18} , Betain ¹³ , Aluminium ^{10,11,12} , Allantoin ¹⁴ , Fucosterol ¹⁴
29.	Ushba ^{10,11,12}	<i>Smilex ornata</i> ^{10,11}	Anant mol ¹⁰ , Saar ¹⁰ , Sapreela ¹⁰	Root ¹² , Branches ¹²	Syncotenic acid, Starch ^{11,12} , Volatile oil ^{10,11,12} , Sterol ¹⁰
30.	Unnab ^{11,12,13,18}	<i>Zizyphus vulgaris</i> ^{11,13,14,18}	Salana	Fruit ^{12,13,18}	Mucilage ¹³ , Sugar ¹⁸ , Tannin ¹⁸ , Carbohydrate ¹⁸ , Zizyberanalic acid ¹⁴ , Sanjoinine ¹⁴
31.	Ghafis ^{8,10,11,12}	<i>Agrimonia eupatoria</i> ^{10,11,18}	Shajar-e-qahra ¹⁰ , Ghais shoka ^{10,12}	Flower ^{11,12}	Tannin ^{10,18} , Mucilage ¹⁰ , Volatile oil ¹⁰ , Vit-K ¹⁸

32.	Kafoor ^{8,9,10,11,12}	<i>Cinnamomum camphora</i> ^{11,13,18}	Kapoor ^{8,9,10,12,18} , Nishapati ¹⁰	Gum ^{11,12}	Volatile oil ^{10,11,12,13}
33.	Kutki ^{9,10,11,12,13,15,18}	<i>Picrorhiza kurroa</i> ^{9,11,13,14,15,18}	Mekha kadi ¹⁰ , Kateeli ¹⁰	Branches ^{10,12}	Danalic acid ^{11,12} , Picrorhizin ^{11,12,13,18} , kumine ^{11,12,13,14,18} , Cathartic acid, 6-Feruloylcatalpol ¹⁴ , Veroncoside ¹⁴ , Minecoside ¹⁴ , Picein ¹⁴ , Androsin ¹⁴ , Catalpol ¹⁴
34.	Kasaundi ^{8,9,10,11,12,13,15,16,17}	<i>Cassia occidentalis</i> ^{10,11,13,15,16,17,18}	Talwar phali ^{9,10,12} , Kashaund ^{10,12}	Seeds ^{10,11,13,15,16,17,18}	Cathartin ⁹ , Salts ^{9,10} , Achrosine ⁹ , Olein ⁹ , Crisophenic acid ^{9,10,11} , Sugar ^{9,11,12,17} , Resin ^{9,11,12} , Starch ^{9,11,12} , Calcium sulphate ^{9,11,12} , Magnesium sulphide ^{9,11,12} , Iron ^{9,11,12}
35.	Hazardana ^{11,13}	<i>Euphorbia hypericifolia</i> ^{11,13,14,17}	-----	Seeds ¹¹	Phenol ¹³ , Essential Oil ¹³ , Glycoside ¹³ , Quercitrin ¹⁴ , Quercetin ¹⁴ , Kempferol ¹⁴
36.	Aftimoon ^{8,9,10,11,12,17}	<i>Cuscuta reflexa</i> ^{11,13,14,15,16,17}	Shaar-uz-zabeeha ^{10,15} , Pechaan ^{10,12} , Aakash bel ^{8,9,10,12,15,16,17} , Amar lata ^{9,10,12,17}	Seeds ^{11,12,13,15,16,17} , Branches ^{11,12,13,15,16,17}	Cuscutin ^{9,10,13,16,17} , Bevercetin ¹⁰ , Resin ⁹ , Maragenin I ¹⁴ , Scoparone ^{14,17} , Melanettin ^{14,17} , Quercetin ^{9,14,16,17} , Hyperoside ^{14,17}
37.	Bathuwa ^{8,11,12,15,17,18}	<i>Chenopodium album</i> ^{11,13,14,15,17,18}	Qatar ^{8,12} , Sarmaq ¹²	Seeds ¹² , Saag ^{12,15}	Vit-C ^{11,13} , Carotine ^{11,13,17} , Volatile oil ^{11,13} , Iron ¹⁷ , Saponins ^{14,17} , Ciptomeridiol ^{14,17} , Phenolic amide ¹⁴
38.	Bachhnaak ^{8,10,11,12}	<i>Aconitum napellus</i> ^{10,11,13,14,18}	Beesh ^{8,10,11,12} , Meetha telia ^{10,11,12}	Root ^{10,11,12}	Aconitine ^{10,11,13,14,18} , Pseudoaconitines ²² , Napelline ²³ , Acotine ¹¹ , Aconitic acid ²³ , Benziacotin ¹¹

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