**SUPPORTING INFORMATION**

Traditional uses, chemical diversity and bioactivities of *Alstonia* R. Br. (Apocynaceae): A review

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| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 1 | Alkaloid | Scholarisin I | C22H24N2O5 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 2 | Scholarisin Ⅱ | C22H26N2O5 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 3 | Scholarisin Ⅲ | C24H28N2O6 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 4 | (3*R*,5*S*,7*R*,15*R*,16*R*,19*E*)-scholarisine F | C21H24N2O4 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 5 | Picraline | C23H26N2O5 | *A. scholaris* | Leaves | China | (Feng et al., 2013) |
| 6 | Melosline C | C20H22N2O4 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 7 | Deacetyldeformopicraline | C20H22N2O3 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 8 | Melosline D | C23H26N2O5 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 9 | Picralinal | C21H22N2O4 | *A. scholaris* | Leaves | USA | (Hou et al., 2012b) |
| 10 | *N1*-methoxymethyl picrinine | C22H26N2O4 | *A. scholaris* | Leaves | China | (Wang et al., 2009) |
| 11 | Picrinine | C20H22N2O3 | *A. scholaris* | Leaves | - | (Rastogi et al., 1970) |
| 12 | Alstiphyllanine F | C32H36N2O9 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 13 | Alstiphyllanine G | C23H28N2O5 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 14 | Alstiphyllanine D | C33H38N2O9 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 15 | 10-methoxy-*N*1-methyl-burnamine-17-*O*-veratrate | C32H36N2O8 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 16 | Quaternine | C23H28N2O5 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 17 | Burnamine-17-*O*-3', 4', 5'-trimethoxybenzoate | C30H32N2O7 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 18 | Alstiphyllanine B | C33H39N2O8+ | *A. macrophylla* | Leaves | Indonesia | (Hirasawa et al., 2009) |
| 19 | Alstiphyllanine C | C34H41N2O9+ | *A. macrophylla* | Leaves | Indonesia | (Hirasawa et al., 2009) |
| 20 | Alstiphyllanine E | C30H32N2O7 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 21 | Desacetylpicraline | C21H24N2O4 | *A. scholaris* | Leaves | - | (Rastogi et al., 1970) |
| 22 | Pikralinal | C21H22N2O4 | *A. scholaris* | Leaves | - | (Rastogi et al., 1970) |
| 23 | Scholarisin Ⅳ | C21H26N2O5 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 24 | Scholarisin Ⅴ | C21H26N2O5 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 25 |  | Scholarisine R | C27H37N2O8 | *A. scholaris* | Leaves | China | (Yang et al., 2017) |
| 26 | Scholarisin Ⅵ | C22H26N2O4 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 27 | 3-*epi*-dihydrocorymine | C22H28N2O4 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 28 | *N4*-demthylechitamine | C21H26N2O4 | *A. scholaris* | Leaves | China | (Feng et al., 2013) |
| 29 | 17-formyl-10-demethoxyvincorine *N*4-oxide | C22H27N2O4 | *A. scholaris* | Leaves | China | (Hu et al., 2018) |
| 30 | 10-demethoxyvincorine *N*4-oxide | C21H27N2O3 | *A. scholaris* | Leaves | China | (Hu et al., 2018) |
| 31 | 17-*O*-acetyl-*N*b-demethylechitamine | C23H28N2O5 | *A. glaucescents* | Stem barks | Thailand | (Keawpradub et al., 1994) |
| 32 | *N*b-demethylechitamine | C21H26N2O4 | *A. glaucescents* | Stem barks | Thailand | (Keawpradub et al., 1994) |
| 33 | Echitaminic acid | C21H26N2O4 | *A. glaucescents* | Stem barks | Thailand | (Keawpradub et al., 1994) |
| 34 | Vincorine | C22H28N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 35 | Echitamine | C22H29N2O4+ | *A. glaucesces*  *A. scholaris*  *A. congensis* | Stem barks  Stem barks  Root barks | - | (Goodson, 1932) |
| 36 | Alstomaline | C20H22N2O3 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 37 | Scholarisine Q | C19H19N2O5 | *A. scholaris* | Leaves | China | (Yang et al., 2017) |
| 38 | Scholarisin Ⅶ | C22H26N2O4 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 39 | (*E*)-16-formyl-5α-methoxystrictamine | C22H24N2O4 | *A. scholaris* | Leaves | China | (Wang et al., 2013) |
| 40 | Alstopenidine H | C21H24N2O4 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 41 | 5α-methoxystrictamine | C21H24N2O3 | *A. scholaris* | Leaves | China | (Wang et al., 2009) |
| 42 | 11-methoxystrictamine | C21H24N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 43 | Strictamine | C20H22N2O2 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 44 | 11-hydroxystrictamine | C20H22N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 45 | 10-methoxycathafoline *N*4-oxide | C21H26N2O4 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 46 |  | 18-hydroxycabucraline. | C22H28N2O4 | *A. pittieri* | Stem barks | Guatemala | (Morfaux et al., 1990) |
| 47 | Cabucraline | C22H28N2O3 | *A. pittieri* | Stem barks | Guatemala | (Morfaux et al., 1990) |
| 48 | Cathafoline *N*4-oxide | C20H24N2O3 | *A. macrophylla* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 49 | Cathafoline | C20H24N2O2 | *A. macrophylla* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 50 | 10-methoxycathafoline | C22H28N2O3 | *A. macrophylla* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 51 | Akuammine | C23H28N2O3 | *A. pittieri* | Stem barks | Guatemala. | (Morfaux et al., 1990) |
| 52 | Alsmaphorazine C | C22H26N2O6 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2012) |
| 53 | Nareline methyl ether | C21H22N2O4 | *A. scholaris* | Leaves | Malaysia | (Kam et al., 1997) |
| 54 | Nareline ethyl ether | C22H24N2O4 | *A. scholaris* | Leaves | Malaysia | (Kam et al., 1997) |
| 55 | 5-*epi*-nareline ethyl ether | C22H24N2O4 | *A. scholaris* | Leaves | Malaysia | (Kam et al., 1997) |
| 56 | 10,11-dimethoxynareline | C23H25NO6 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 57 | Scholarisine S | C20H20N2O4 | *A. scholaris* | Leaves | China | (Yang et al., 2017) |
| 58 | Vallesamin | C20H24N2O3 | *A. scholaris* | Leaves | China | (Zhao et al., 2020a) |
| 59 | 19,20-(*E)*-vallesamine | C20H24N2O3 | *A. scholaris* | Leaves | China | (Wang et al., 2009) |
| 60 | 19*Z*-vallesamine | C20H24N2O3 | *A. scholaris* | Leaves | USA | (Hou et al., 2012b) |
| 61 | Angustilobine A | C20H22N2O3 | *A. angustiloba* | Leaves | Malaysia | (Ku et al., 2011) |
| 62 | Angustilobine B | C20H22N2O3 | *A. angustiloba* | Leaves | Malaysia | (Ku et al., 2011) |
| 63 | Alstilobanine A | C19H24N2O4 | *A. angustiloba* | Leaves | Malaysia | (Koyama et al., 2008) |
| 64 | Angustilodine | C20H24N2O4 | *A. angustiloba* | Leaves | Malaysia | (Kam and Choo, 2004c) |
| 65 | Alstilobanine E | C19H22N2O4 | *A. angustiloba* | Leaves | Malaysia | (Koyama et al., 2008) |
| 66 | Scholarisine U | C20H24N2O4 | *A. scholaris* | Leaves | China | (Yu et al., 2018) |
| 67 | Scholarisine T | C18H18N2O2 | *A. scholaris* | Leaves | China | (Yu et al., 2018) |
| 68 | Scholarisine V | C21H26N2O3 | *A. scholaris* | Leaves | China | (Yu et al., 2018) |
| 69 | Scholarisine W | C20H22N2O2 | *A. scholaris* | Leaves | China | (Yu et al., 2018) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 70 |  | Scholarisine I | C20H22N2O2 | *A. scholaris* | Leaves | China | (Yu et al., 2018) |
| 71 | Scholarisine A | C19H18N2O2 | *A. scholaris* | Leaves | China | (Cai et al., 2008) |
| 72 | Scholarisine J | C20H24N2O2 | *A. scholaris* | Leaves | China | (Yu et al., 2018) |
| 73 | Alstobrogalin | C20H21N3O3 | *A. scholaris* | Leaves | Malaysia | (Krishnan et al., 2019) |
| 74 | Alstoscholactine | C21H24N2O5 | *A. scholaris* | Leaves | Malaysia | (Krishnan et al., 2018) |
| 75 | Manilamine (18-hydroxy-19,20-dehydro-7,21-seco-uleine) | C18H22N2O | *A. scholaris* | Leaves | Espana | (Macabeo, et al., 2005) |
| 76 | *N*4-methyl angustilobine B | C21H25N2O3+ | *A. scholaris* | Leaves | Espana | (Macabeo, et al., 2005) |
| 77 | Angustilobine B- *N*4 -oxide | C20H22N2O4 | *A. scholaris* | Leaves | Espana | (Macabeo, et al., 2005) |
| 78 | 15-hydroxyangustilobine A | C20H22N2O4 | *A. boonei* | Leaves | Ghana | (Spiegler et al., 2021) |
| 79 | Alstolaxepine | C19H22N2O4 | *A. scholaris* | Leaves | Malaysia | (Krishnan et al., 2018) |
| 80 | Alstolobine A | C20H24N2O3 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 81 | Nor-6,7-secoangustilobine A | C19H22N2O3 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 82 | Scholarinine A | C21H27N3O2 | *A. scholaris* | Branches Leaves | China | (Zhan et al., 2020) |
| 83 | Alstonamic acid | C19H20N2O3 | *A. angustiloba* | Leaves | Malaysia | (Koyama et al., 2008) |
| 84 | 6,7-secoangustilobine B | C20H24N2O3 | *A. angustiloba*  *A. congensis*  *A. scholaris* | Leaves  Roots | Malaysia | (Koyama et al., 2008; Ku et al., 2011) |
| 85 | Scholarisine I | C17H13NO2 | *A. scholaris* | Leaves | China | (Cai et al., 2010) |
| 86 | Nareline | C21H22N2O4 | *A. scholaris* | Leaves | - | (Hou et al., 2012b) |
| 87 | (±)-Scholarisine II | C17H15NO3 | *A. scholaris* | Leaves | China | (Cai et al., 2010) |
| 88 | Alstilobanine C | C20H24N2O4 | *A. angustiloba* | Leaves | Malaysia | (Koyama et al., 2008) |
| 89 | Undulifoline | C20H24N2O3 | *A. undulifolia* | Stem barks  Leaves | Malaysia | (Massiot et al., 1992) |
| 90 |  | Alstilobanine F | C19H22N2O4 | *A. angustiloba* | Leaves | Malaysia | (Koyama et al., 2008) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 91 |  | Alpneumine H | C20H24N2O4 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 92 | Alstilobanine B | C19H22N2O3 | *A. angustiloba* | Leaves | Malaysia | (Koyama et al., 2008) |
| 93 | Alstoscholarisine K | C24H26N3O4 | *A. scholaris* | Leaves | China | (Yu et al., 2021) |
| 94 | Scholarisine P | C21H24N2O3 | *A. scholaris* | Leaves | China | (Yang et al., 2017) |
| 95 | 20-*epi*-Antirhine | C19H24N2O | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| 96 | Melosline E | C19H24N2O2 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 97 | Melosline F | C20H26N2O3 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 98 | Antirhine *N*4-oxide | C19H24N2O2 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 99 | Isovallesiachotamine | C20H24NO25 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 100 | Vallesiachotamine | C20H24NO25 | *A. scholaris* | Roots | China | (Zhang et al., 2019) |
| 101 | Macrodasine B | C26H32N2O5 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 102 | *N4*-methyl-*N*4, 21-secotalpinine | C21H26N2O2 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 103 | 7-hydroxypleiocarpamine | C20H24N2O3 | *A. angustifolia* | - | Malaysia | (Tan et al., 2014) |
| 104 | Pleiocarpamine | C20H22N2O2 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Roots | Thailand | (Keawpradub et al., 1999) |
| 105 | Pleiomalicine | C21H23N3O4 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2012) |
| 106 | Pleiomaltinine | C26H26N2O5 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2012) |
| 107 | Scholarisine R | C27H36N2O8 | *A. scholaris* | Leaves | China | (Yang et al., 2017) |
| 108 | (16R)-*E*-isositsnikine | C22H28N2O3 | *A. scholaris* | Leaves | China | (Lounasmaa et al., 1995) |
| 109 | 17-nor-excelsinidine | C19H20N2O2 | *A. scholaris* | Leaves | China | (Zhang et al., 2014) |
| 110 | 19,20-dihydroisositsirikine | C21H30N2O3 | *A. mairei* | Roots | China | (Macabeo et al., 2005) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 111 |  | Alstomairine F | C31H38N2O7 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 112 | Alstomairine G | C31H36N2O7 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 113 | Alstolucine B | C20H22N2O3 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 114 | Alstolucine C | C20H22N2O4 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 115 | Alstolucine D | C20H22N2O4 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 116 | Astolucine E | C20H22N2O4 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 117 | Alstolucine F | C20H22N2O3 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 118 | Alstomairine A | C21H24N2O5 | *A. mairei* | Leaves | China | (Yan et al., 2017) |
| 119 | Alstomairine B | C22H27N2O4+ | *A. mairei* | Leaves | China | (Yan et al., 2017) |
| 120 | Alstomairine C | C21H25N2O4+ | *A. mairei* | Leaves | China | (Yan et al., 2017) |
| 121 | Alpneumine A | C20H22N2O5 | *A. pneumatophore* | Leaves | Malaysia and China | (Koyama et al., 2010) |
| 122 | Alpneumine B | C20H22N2O4 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 123 | Alpneumine C | C20H22N2O4 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 124 | Alpneumine D | C20H22N2O4 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 125 | Alpneumine E | C20H22N2O3 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 126 | Lagumicine | C20H22N2O4 | *A. angustifolia*  *A. scholaris* | Stem barks  Leaves | Malaysia | (Kam and Choo, 2004a; Hou et al., 2012b) |
| 127 | Brucine | C23H26N2O4 | *A. macrophylla* | Barks | Philippines | (Tan et al., 2019) |
| 128 | Alstonlarsine A | C21H24N2O3 | *A. scholaris* | Roots  Barks | China | (Zhu et al., 2019) |
| 129 | *N4* -demethyl-12-methoxyalstogustine | C21H26N2O4 | *A. scholaris* | - | China | ((Kam et al., 1997)) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 130 |  | *N*4 -demethyl-12-methoxyalstogustine *N*4 oxide | C21H26N2O5 | *A. scholaris* | - | Malaysia | (Kam et al., 1997) |
| 131 | Vnervine | C20H24N2O3 | *A. spatulata* | Stem barks Leaves | Malaysia | (Tan et al., 2010) |
| 132 | Akuammicine *N*-oxide | C20H22N2O3 | *A. scholaris* | Trunk barks | Indonesia | (Salim et al., 2004) |
| 133 | 11-methyoxy-akuammicine | C21H24N2O3 | *A. angustifolia* | Roots  Barks | Malaysia | (Said et al., 1992) |
| 134 | Akuammicine | C20H22N2O2 | *A. angustifolia* | Stem barks Leaves | Malaysia | (Said et al., 1992) |
| 135 | Nor-C-fluorocurarine | C19H20N2O | *A. angustifolia* | Stem barks | Malaysia | (Said et al., 1992) |
| 136 | 20 (*S*)-tubotaiwine | C20H24N2O2 | *A. scholaris* | Leaves | Manila | (Boonchuay and Court, 1976) |
| 137 | 20(*R*)-tubotaiwine | C20H24N2O2 | *A. spatulata* | Stem barks Leaves | Malaysia | (Tan et al., 2010) |
| 138 | Alstrostine H | C21H24N2O4 | *A. rostrata* | Trunks | China | (Zhong et al., 2017) |
| 139 | Alstrostine C | C22H26N2O5 | *A. rostrata* | Trunks | China | (Zhong et al., 2017) |
| 140 | Alsmaphorazine D | C20H24N2O5 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2012) |
| 141 | Alsmaphorazine E | C21H26N2O6 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2012) |
| 142 | Alstonlarsine B | C19H24N2O4 | *A. scholaris* | Roots  Barks | China | (Zhu et al., 2019) |
| 143 | Alstonlarsine C | C19H22N2O3 | *A. scholaris* | Roots  Barks | China | (Zhu et al., 2019) |
| 144 | Alstonlarsine D | C19H22N2O3 | *A. scholaris* | Roots  Barks | China | (Zhu et al., 2019) |
| 145 | Alsmaphorazine B | C20H20N2O6 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 146 |  | Alsmaphorazine A | C20H20N2O5 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 147 | Reserpine | C33H40N2O9 | *A. constricta* | Root barks | - | (Ashkenazy et al., 2002) |
| 148 | Alstomairine E | C30H32N2O7 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 149 | Alloyohimbine | C21H24N2O3 | *A. mairei* | Roots | China | (Li et al., 1998) |
| 150 | Pseudoyohimbine | C22H28N2O3 | *A. mairei* | Roots | China | (Li et al., 1998) |
| 151 | Venenatine | C22H28N2O4 | *A. venenata* | Barks | - | (Govindachari et al., 1965; Chatterje et al., 1965) |
| 152 | Venenatic acid | C21H26N2O4 | *A. venenata* | Barks | - | (Govindachari et al., 1965) |
| 153 | Isovenenatine | C22H28N2O4 | *A. venenata* | Barks | - | (Govindachari et al., 1965) |
| 154 | Venenatyl alcohol | C21H28N2O3 | *A. venenata* | Barks | - | (Govindachari et al., 1965) |
| 155 | Alstovenine | C23H30N2O4 | *A. venenata* | Barks | - | (Chatterje et al., 1965) |
| 156 | *β*-yohimbine | C21H24N2O3 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 157 | *α*-yohimbine | C21H24N2O3 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 158 | Lochnerine | C21H26N2O2 | *A. macrophylla* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 159 | Vellosimine | C19H20N2O | *A. yunnanensis* | Roots | China | (Chen et al., 1983) |
| 160 | Sarpagine | [C](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[19](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[H](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[22](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[N](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[2](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[O](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula)[2](https://pubchem.ncbi.nlm.nih.gov/" \l "query=C19H22N2O2" \o "Find all compounds that have this formula) | *A. yunnanensis* | Roots | China | (Chen et al., 1983) |
| 161 | Akuammidine | C21H24N2O3 | *A. scholaris* | Leaves | USA | (Hou et al., 2012b) |
| 162 | 10-methoxyaffinisine | C21H26N2O4 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 163 | Affinisine | C20H24N2O | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 164 |  | Normacusine B | C19H22N2O | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| No. |  | *Name* | Formula | Species | Plant parts | Sites | Reference |
| 165 |  | Alstoumerine | C20H24N2O2 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves、  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| 166 | Alstomutinine E | C19H22N2O3 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 167 | Alstopenidine C | C21H26N2O3 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 168 | Alstopenidine D | C22H28N2O4 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 169 | Alstopenidine E | C22H28N2O5 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 170 | Affinisine oxindole | C19H22N2O2 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 171 | Fluorocarpamine | C20H22N2O3 | *A. macrophylla* | Bark | Malaysia | (Kam et al., 2004) |
| 172 | Alstomutinine C | C21H26N2O3 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 173 | Alstomutinine D | C19H22N2O3 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 174 | Talpinine oxindole | C20H24N2O3 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 175 | Vincamaginines B | C41H44N2O11 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 176 | 4'-hydroxy-3',5'-di-methoxybenzoylvincamajine | C31H34N2O7 | *A. angustifolia* | Roots  Barks | Malaysia | (Said et al., 1992) |
| 177 |  | Perakine | C20H22N2O | *A. yunnanensis* | Roots | China | (Chen et al., 1983) |
| No. |  | Name | Formula | Species | Plant parts | Sites | Reference |
| 178 |  | l l-methoxy-17-epivincamajine | C23H28N2O4 | *A. pittieri* | Stem barks | Guatemala. | (Morfaux et al., 1990) |
| 179 | 11-methoxyvmcamajine | C23H28N2O4 | *A. pittieri* | Stem barks | Guatemala. | (Morfaux et al., 1990) |
| 180 | Perakine *N*4*-*oxide | C21H22N2O4 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 181 | Raucaffrinoline *N*4*-*oxide | C21H24N2O4 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 182 | Vinorine *N*1, *N*4-dioxide | C21H22N2O4 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 183 | Vinorine *N*4-oxide | C21H22N2O3 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 184 | 10-methoxyvincamajine | C24H30N2O4 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 185 | Vincamedine | C24H28N2O4 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 186 | Vincamajine-17-*O*-veratrate | C29H32N2O5 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 187 | Vincamajine-17-*O*-3’ ,4’ ,5’ -trimethoxybenzoate | C30H34N2O6 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 188 | Alstiphyllanine H | C22H26N2O4 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2010) |
| 189 | Rauvomitin | C30H34N2O5 | *A. macrophylla* | Barks | Philippines | (Tan et al., 2019) |
| 190 | Vincamaginines A | C40H42N2O11 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 191 | Vincamajine | C22H26N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 192 | Quebrachidine | C21H24N2O3 | *A. macrophylla* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 193 | Alstiphyllanine I | C32H34N2O7 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 194 | Alstiphyllanine J | C33H36N2O8 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 195 | Alstiphyllanine K | C30H30N2O5 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 196 | Alstiphyllanine L | C30H30N2O5 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 197 | Alstiphyllanine N | C30H30N2O5 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 198 | Alstiphyllanine M | C28H28N2O4 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 199 | Alstiphyllanine O | C30H32N2O7 | *A. macrophylla* | Leaves | Indonesia | (Arai et al., 2012) |
| 200 |  | 17-formyl-10-demethoxyvincorine *N*4-oxide | C23H28N2O5 | *A. scholaris* | Leaves | China | (Hu et al., 2018) |
| No. |  | Name | Formula | Species | Plant parts | Sites | Reference |
| 201 |  | 4'-hydroxy-3',5'-di-methoxybenzoylvincamajine | C31H34N2O7 | *A. angustifolia* | Roots  Barks | Malaysia | (Said et al., 1992) |
| 202 | *N*1-demethylalstophylline | C21H24N2O3 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 203 | *N*1-demethylalstophyllal | C21H24N2O3 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 204 | Alstonerinal | C21H24N2O2 | *A. macrophylla* | Stem barks | Malaysia | (Kam et al., 1999) |
| 205 | Alstomutinine A | C21H26N2O4 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 206 | Alstomutinine B | C20H24N2O3 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 207 | *N*4-demethylalstonerine | C20H22N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 208 | *N*4-demethylalstonerinal | C20H22N2O2 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 209 | Alstonerine | C21H24N2O2 | *A. muelleriana*  *A. macrophylla*  *A. angustifolia* | Leaves  Roots  Barks | Malaysia | (Keawpradub et al., 1999; Said et al., 1992) |
| 210 | Macrodasine A | C26H34N2O5 | *A. macrophylla* | Ground bark | Malaysia | (Kam et al., 2004a) |
| 211 | Macrodasine B | C26H32N2O2 | *A. macrophylla* | Ground bark | Malaysia | (Kam et al., 2004a) |
| 212 | Alstomicine | C20H25N2O2 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2010) |
| 213 | Alstohentine | C21H28N2O3 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 214 | Alstopirocine | C25H35N3O4 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2010) |
| 215 | Alstolactone | C20H22N2O2 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 216 | 6-oxoalstophyllal | C22H24N2O4 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 217 | Macrocarpine B | C21H28N2O2 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 218 | Macrocarpine C | C23H30N2O3 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 219 |  | Macrocarpine A | C21H28N2O2 | A. macrophylla | Leaves | Malaysia | (Kam and Choo, 2004b) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 220 |  | Talcarpine | C21H26N2O2 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| 221 | 6-oxoalstophylline | C22H24N2O4 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 222 | Alstophyllal | C23H26N2O3 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 223 | Alstophylline | C21H26N2O3 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| 224 | 16-hydroxyalstonisine | C20H22N2O4 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 225 | 16-hydroxyalstonal | C20H22N2O4 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 226 | 16-hydroxy-*N*4-demethylalstophylline oxindole | C21H24N2O5 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 227 | 16-hydroxy-*N*4-demethylalstophyllal oxindole | C21H24N2O5 | *A. macrophylla* | Leaves | Malaysia | (Kam and Choo, 2004b) |
| 228 | Alstonisine | C20H22N2O3 | *A. muelleriana*  *A. macrophylla* | Leaves | Leaves | (Peterson and Cook, 1995) |
| 229 | *N*4-demethylalstophylline oxindole | C21H24N2O4 | *A. muelleriana*  *A. macrophylla* | Leaves | - | (Peterson and Cook, 1995) |
| 230 | Alstonisinine A | C19H20N2O4 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 231 | Alstonisinine B | C19H20N2O4 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 232 | Alstonisinine C | C20H22N2O4 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 233 | *N*4-demethylalstophyllal oxindole | C20H22N2O4 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 234 | Alstonoxine F | C21H28N2O4 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 235 | Macroxine | C20H26N2O3 | *A. muelleriana*  *A. macrophylla* | Leaves | - | (Peterson and Cook, 1995) |
| 236 | Alstofoline | C21H22N2O4 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 237 |  | *N*1-demethylalstonisine | C19H20N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 238 |  | *N*1-demethylalstonal | C20H22N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 239 | Alstonoxine A | C19H24N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 240 | Alstonoxine B | C19H26N2O3 | *A. angustifolia* | Stem barks | Malaysia | (Kam and Choo, 2004a) |
| 241 | Alstrostine G | C21H24N2O4 | *A. rostrata* | Trunks | China | (Zhong et al., 2017) |
| 242 | Alpneumine G | C21H26N2O4 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 243 | Vincamine | C22H27NO3 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 244 | Apovincamine | C22H27NO2 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 245 | Kopsinine | C21H26N2O2 | *A. venenata* | Barks | - | (Govindachari et al., 1965; Chatterjee et al., 1965) |
| 246 | Vincaddiformine | C21H26N2O2 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 247 | Leuconoxine | C19H22N2O2 | *A. spatulata* | Stem barks | Malaysia | (Tan et al., 2010) |
| 248 | Leuconolam | C20H24N2O4 | *A. spatulata* | Stem barks | Malaysia | (Goh et al., 1989) |
| 249 | *epi*- leuconolam | C20H24N2O4 | *A. spatulata* | Stem barks | Malaysia | (Goh et al., 1989) |
| 250 | 14-chloro-15-hydroxyvincadifformine | C21H25ClN2O3 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 251 | 11-hydroxy-6,7-epoxy-8-oxo-vincadifformine | C21H22N2O5 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 252 | 11-methoxy-6,7-epoxy-8-oxovincadifformine | C22H24N2O5 | *A. yunnanensis* | Whole plants | China | (Cao et al., 2012) |
| 253 | Alstomairine D | C24H28N2O6 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 254 | Lochnericine | C21H24N2O3 | *A. mairei* | Root  Stems | China | (Li et al., 2022) |
| 255 | 19-acetoxy-11-methoxytabersonine | C23H26N2O5 | *A. mairei* | Roots  stems | China | (Li et al., 2022) |
| 256 | Echitoveniline | C31H36N2O7 | *A. venenata* | - | - | (Majumder et al., 1979) |
| 257 |  | Tabersonine | C21H24N2O4 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 258 |  | 16-methoxytabersonine | C22H26N2O3 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 259 | 19-hydroxytabersonine | C21H24N2O3 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 260 | Vandrikidine | C22H26N2O4 | *A. mairei* | Roots  Stems | China | (Li et al., 2022) |
| 261 | Vincadifformine | C21H26N2O2 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 262 | Alstomacroline | C42H50N4O5 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| 263 | l0-methoxy-11-[10-(11-methoxylvincamajinyl)]-cathafoline | C45H54N4O7 | *A. pittieri* | Stem barks | Guatemala. | (Morfaux et al., 1990) |
| 264 | Angustiphylline | C39H46N4O6 | *A. angustiloba* | Stem barks | Malaysia | (Kun et al., 2011) |
| 265 | Villastonine | C41H48N4O4 | *A. angustifolia* | Roots  Barks | Malaysia | (Said et al., 1992) |
| 266 | Thungfaine | C43H52N4O5 | *A. macrophyllaa* | Stems | Thailand | (Changwichit et al., 2004) |
| 267 | Lumusidine A | C43H50N4O4 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2013) |
| 268 | Perhentinine A | C43H52N4O5 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2013) |
| 269 | Perhentidine B | C43H52N4O5 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2012) |
| 270 | Perhentidine C | C43H52N4O5 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2012) |
| 271 | Thungfaine | C43H52N4O5 | *A. macrophyllaa* | Stems | Thailand | (Changwichit et al., 2004) |
| 272 | *E*-seco-macralstonine | C43H52N4O5 | *A. angustifolia* | Barks | Malaysia | (Lim et al., 2012) |
| 273 |  | Macralstonine | C43H52N4O5 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2013) |
| 274 |  | *O*-methylmacralstonine | C44H54N4O5 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 275 |  | Lumusidine B | C43H52N4O5 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2013) |
| 276 | Lumusidine C | C46H58N4O5 | *A. macrophylla* | Barks | Malaysia | (Lim et al., 2013) |
| 277 | *O*-acetylmacralstonine | C45H54N4O6 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Thailand | (Keawpradub et al., 1999) |
| 278 | Angustilongine A | C43H54N4O5 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 279 | AngustilongineD | C44H56ClN4O5 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 280 | Angustilongine C | C43H52N4O4 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 281 | Angustilongine B | C42H50N4O4 | *A. penangiana* | Leaves | Malaysia | (Yeap et al., 2018) |
| 282 | Villalstonidine F | C40H46N4O4 | *A. macrophylla* | barks | Malaysia | (Lim et al., 2013) |
| 283 | Villalstonine | C41H48N4O | *A. macrophylla* | barks | Malaysia | (Keawpradub et al., 1999) |
| 284 | Villastonine *Nb*-oxide | C41H48N4O5 | *A. macrophylla*  *A. glaucescens*  *A. scholaris* | Leaves  Stem barks Root barks | Stem barks | (Keawpradub et al., 1999) |
| 285 | Macrocarpamine | C41H44N4O3 | *A. angustifolia* | Roots  Barks | Malaysia | (Said et al., 1992) |
| 286 | Rupestrisine A | C42H44N4O5 | *A. rupestris* | - | - | (Wang et al., 2021) |
| 287 | Rupestrisine B | C42H46N4O5 | *A. rupestris* | - | - | (Wang et al., 2021) |
| 288 | Alstrostine A | C44H56N2O19 | *A. rostrata* | Leaves | - | (Cai et al., 2011) |
| 289 | Alstrostine B | C38H46N2O14 | *A. rostrata* | Leaves | - | (Cai et al., 2011) |
| 290 |  | Actinophyllic acid | C21H24N2O4 | *A. actinophylla* | Leaves |  | (Carroll et al., 2005) |
| 291 |  | AlpneumineF | C20H22N2O4 | *A. pneumatophora* | Leaves | Malaysia | (Koyama et al., 2010a) |
| 292 |  | Alstolarine B | C22H26N2O6 | *A. scholaris* | Leaves | China | (Zhang et al., 2020) |
| 293 |  | Alstolarine A | C21H24N2O4 | *A. scholaris* | Leaves | China | (Zhang et al., 2020) |

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| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 294 |  | Tetrahydroalstonine | C21H24N2O3 | *A. yunnanensis*  *A. mairei* | Roots | China | (Chen et al., 1983; Li et al., 1998) |
| 295 |  | Strictosamide | C26H30N2O8 | *A. scholaris* | Leaves | China | (Morita et al., 1989) |
| 296 |  | Alstonine | C21H20N2O3 | *A. scholaris* | Barks | - | (Baliga, 2010) |
| 297 |  | Voacangine | C22H28N2O3 | *A. boonei* | Barks | - | (Adotey et al., 2012) |
| 298 |  | 6,7-*seco-*19,20-epoxyangustilobine B | C20H24N2O4 | *A. angustiloba* | Leaves | Malaysia | (Kun et al., 2011) |
| 299 |  | *Z*-alstoscholarine | C22H20N2O3 | *A. scholaris* | Leaves | China | (Hou et al., 2012a) |
| 300 |  | *E*-alstoscholarine | C22H20N2O3 | *A. scholaris* | Leaves | China | (Hou et al., 2012a) |
| 301 |  | Alstrostine J | C20H22N2O3 | *A. rostrata* | Trunks | China | (Zhong et al., 2017) |
| 302 |  | Angustilobine C | C20H24N2O5 | *A. angustiloba* | Leaves | Malaysia | (Kun et al., 2011) |
| 303 |  | Andransinine | C23H28N2O3 | *A. angustiloba* | Leaves | Malaysia | (Kun et al., 2011) |
| 304 |  | 4,6-secoangustilobinal A | C20H22N2O4 | *A. spatulata* | Leaves | Malaysia | (Tan et al., 2010) |
| 305 |  | Cantleyine | C11H13N1O3 | *A. scholaris* | Branches | China | (Ravao et al., 1985) |
| 306 |  | Angustimaline E | C11H17NO2 | *A. angustifolia.* | Stem barks | Malaysia | (Tan et al., 2012) |
| 307 |  | Angustimaline D | C12H17NO2 | *A. angustifolia.* | Stem barks | Malaysia | (Tan et al., 2012) |
| 308 |  | Alstochonine A | C1oH14NO3 | *A. scholaris* | Branches | China | (Zhang et al., 2022) |
| 309 |  | Angustimalal | C13H14NO3 | *A. macrophylla* | Barks | Malaysia | (Kam et al., 2004) |
| 310 |  | Angustimaline | C13H19NO3 | *A. angustifolia.* | Stems | - | (Kam et al.,1997) |
| 311 |  | Angustimaline A | C12H17NO3 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2012) |
| 312 |  | Angustimaline B | C13H19NO3 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2012) |
| 313 |  | Angustimaline C | C13H19NO3 | *A. angustifolia* | Stem barks | Malaysia | (Tan et al., 2012) |
| 314 |  | Alstochonine B | C10H12NO | *A. scholaris* | Branches | China | (Zhang et al., 2022) |
| 315 |  | Venoterpine | C9H11NO | *A. scholaris* | Branches | China | (Ravao et al., 1985) |
| 316 |  | Alstopenidine F | C21H24N2O 3 | *A. penangiana* | Stem barks | Malaysia | (Yeap et al., 2020) |
| 316 |  | Alstopenidine F | C21H24N2O 3 | *A. penangiana* | Stem barks | Malaysia | (Yeap et al., 2020) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 317 |  | Alstopenidine G | C21H24N2O4 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 318 |  | Alstochalotine | C14H19NO4 | *A. penangiana* | Stem barks Leaves | Malaysia | (Yeap et al., 2020) |
| 319 |  | Gelsochalotine | C14H19NO4 | *A. scholaris* | Branches | China | (Liang et al., 2013) |
| 320 | Iridoid | Sweroside | C16H24O9 | *A. glaucescents* | Stem barks | Thailand | (Keawpradub et al., 1994) |
| 321 | Naresuanoside | C31H38O18 | *A. macrophylla* | Stems | Thailand | (Changwichit et al., 2004) |
| 322 | Dihydroepinaucledal | C10H14O4 | *A. scholaris* | Branches | China | (Geng et al., 2013) |
| 323 | Swerimilegenin J | C10H14O4 | *A. scholaris* | Branches | China | (Geng et al., 2013) |
| 324 | Scholarein A | C9H16O2 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 325 | Scholarein B | C9H16O2 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 326 | Scholarein C | C9H16O3 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 327 | Scholarein D | C10H18O3 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 328 | Isoboonein | C9H14O3 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 329 | Alyxialactone | C10H16O4 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 330 | Loganin | C17H26O10 | *A. scholaris* | Barks | China | (Feng et al., 2008) |
| 331 | Triterpene | 30-oxo-lupeol | C30H48O2 | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 332 |  | Lupenyl acetate | C32H52O2 | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 333 |  | Betulin | C30H50O2 | *A. scholaris* | Leaves | Egypt | (El-Askary et al., 2012) |
| 334 |  | Betulinic acid | C30H48O3 | *A. scholaris* | Leaves | Egypt | (El-Askary et al., 2012) |
| 335 |  | Lupeol acetate | C31H50O2 | *A. scholaris* | Aerial parts | Egypt | (Sultana et al., 2020) |
| 336 |  | Cylicodiscic acid | C30H48O4 | *A. scholaris* | Leaves | China | (Feng et al., 2013) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 337 |  | 23-hydroxyursolic acid | C29H46O4 | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 338 |  | Ursolic acid | C30H48O3 | *A. macrophylla* | Stem bark Leaves | - | (Adotey et al., 2012) |
| 339 |  | *β*-amyrin | C30H50O | *A. booneithe* | Root barks | - | (Adotey et al., 2012) |
| 340 |  | *α*-amyrenone | C30H48O | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 341 |  | Maslinic acid | C30H48O4 | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 342 |  | Friedelinol | C30H52O | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 343 |  | Friedelin | C30H50O | *A*. *mairei* | Stem barks Leaves | China | (Li et al., 2015) |
| 344 |  | 12-ursene-2,3,18,19-tetrol,28 acetate | C38H66O7 | *A. scholaris* | Aerial parts | Egypt | (Sultana et al., 2020) |
| 345 |  | Alstoprenyol | C30H50O2 | *A. scholaris* | Aerial parts | Egypt | (Sultana et al., 2020) |
| 346 |  | 3*β*-hydroxy-24-nor-urs-4,12,28-triene Triterpene | C31H50O2 | *A. scholaris* | Aerial parts | Egypt | (Sultana et al., 2020) |
| 347 |  | 3*β*-acetate-24-nor-urs-4,12-diene ester Triterpene | C31H48O2 | *A. scholaris* | Flowers | Pakistan | (Sultana and Saleem, 2010) |
| 348 |  | 3,28-*β*-diacetoxy-5-olea-Triterpene | C33H52O4 | *A. scholaris* | Flowers | Pakistan | (Sultana and Saleem, 2010) |
| 349 |  | Oleanolic acid | C30H48O3 | *A. scholaris* | Leaves | China | (Feng et al., 2013) |
| 350 |  | Alstonic acid A | C30H48O3 | *A. scholaris* | Leaves | China | (Wang et al., 2009) |
| 351 |  | Alstonic acid B | C30H46O3 | *A. scholaris* | Leaves | China | (Wang et al., 2009) |
| 352 |  | *β*-sitosterol | C29H50 | *A. macrophylla* | Stem barks Leaves | India | (Tan et al., 2019) |
| 353 |  | *β*-sitosterol glucoside | C35H60O6 | *A. macrophylla* | Stem barks | India | (Tan et al., 2019) |

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| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 354 |  | Stigmasterol | C31H50O2 | *A. macrophylla* | Barks | Philippines | (Tan et al., 2019) |
| 355 |  | *γ*-sitosterol | C29H50O | *A. macrophylla* | Barks | Philippines | (Tan et al., 2019) |
| 356 |  | 24-methylenecycloartanol | C31H54O | *A. macrophylla* | Barks | Philippines | (Tan et al., 2019) |
| 357 |  | Campesterol | C28H48O | *A. macrophylla* | Barks | Philippines | (Tan et al., 2019) |
| 358 |  | Lanosta  5ene,24-ethyl-3-*O*--D-glucopyranoside | C38H68O6 | *A. scholaris* | Aerial parts | Egypt | (Sultana et al., 2020) |
| 359 |  | lanosta,5ene,24-ethyl-3-*O*-*β*-D-glucopyranosideester | C32H52O6 | *A. scholaris* | Aerial parts | Egypt | (Sultana et al., 2020) |
| 360 |  | Alstoscholarinoid A | C26H46O3 | *A. scholaris* | Leaves | - | (Hu et al., 2021) |
| 361 |  | Alstoscholarinoid B | C30H46O4 | *A. scholaris* | Leaves | - | (Hu et al., 2021) |
| 362 |  | Cycloeucalenol | C30H48O | *A. scholaris* | Leaves | China | (Feng et al., 2013) |
| 363 | Flavonoid | Tricin-4’-*O*-*β*-L-arabinoside | C22H22O11 | *A. macrophyllaa* | Leaves | India | (Parveen et al., 2010) |
| 364 | Vitexin | C21H20O10 | *A. macrophyllaa* | Leaves | India | (Parveen et al., 2010) |
| 365 | Myricetin-3’ -rhamnoside-3-*O*-galactoside | C27H30O17 | *A. macrophyllaa* | Leaves | India | (Parveen et al., 2010) |
| 366 | 3-*O*-*β*-D-xylopyranosyl(1’’’-2’’) -*β*-D- Galactopyranoside | C26H28O16 | *A. scholaris* | Leaves | Thailand | (El-Askary et al., 2012) |
| 367 |  | 6-(2,4-dihydroxyphenyl)-4- hydroxy-2-prop-1- en-2-yl-2,3-dihydrofuro [3,2-g] chromen-5- one | C20H16O6 | *A. scholaris* | Stem barks | India | (Soni et al., 2019) |
| 368 |  | Isoquercitrin | C21H20O12 | *A. scholaris* | Leaves | Egypt | (El-Askary et al., 2013) |
| 369 |  | Quercetin 3-*O*-*β*-D-xylopyranosyl(1'''→2")-*β*-D-galactopyranoside | C27H30O14 | *A. scholaris* | Leaves | Egypt | (El-Askary et al., 2013) |
| 370 |  | 3, 5, 7- Trihydroxyflavone | C9H6O5 | *A. scholaris* | Leaves | India | (Abinaya and Gayathri, 2019) |
| 371 |  | Tectochrysin | C16H12O4 | *A. mairei* | Branches | China | (Li et al., 2105) |
| 372 |  | 5,6-dihydroxy-7,4-dimethoxyflavone | C17H14O6 | *A. mairei* | Branches Leaves | China | (Li et al., 2105) |
| 373 |  | 5,3’-dihydroxy-7,4’-dimethoxyflavone | C17H14O6 | *A. mairei* | Branches Leaves | China | (Li et al., 2105) |
| 374 |  | 7-hydroxy- 5,3’,4’-trimethoxyflavone | C18H16O6 | *A. mairei* | Branches Leaves | China | (Li et al., 2105) |
| 375 |  | 5,7,3’,4’-tetramethoxyflavone | C19H18O7 | *A. mairei* | Branches Leaves | China | (Li et al., 2105) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 376 |  | 5-hydroxy-6,7,8,4’-tetramethoxyflavone | C20H20O8 | *A. mairei* | Branches Leaves | China | (Li et al., 2105) |
| 377 |  | 5-hydroxy-6,7,8,3’,4’-pentamethoxyflavone | C19H18O6 | *A. mairei* | Branches  Leaves | China | (Li et al., 2105) |
| 378 |  | 5,6-benzoflavone | C19H12O2 | *A. scholaris* | Flowers  Fruits | Pakistan | (Ali et al., 2022) |
| 379 |  | 3,4′,5,7-Tetrahydroxyflavone 3-rhamnoside | C21H20O10 | *A. scholaris* | Leaves | Egypt | (El-Askary et al., 2013) |
| 380 | Fatty acid | - | C16H32O2 | *A. boonei* | Barks | - | (Adotey et al., 2012) |
| 381 | Phenolic acid | Chlorogenic acid | C16H18O9 | *A. scholaris* | Leaves | Egypt | (El-Askary et al., 2013) |
| 382 | Alstoschonoid A | C14H18O6 | *A. scholaris* | Branches | China | (Zhang et al., 2020) |
| 383 |  | Alstoschonoid B | C14H18O6 | *A. scholaris* | Branches | China | (Zhang et al., 2020) |
| 384 | Methyl-4-[2-hydroxy-2-(4-hydroxy-3-methoxyphenyl) -l-  (hydroxymethyl) ethyl] ferulate | C21H24O8 | *A. scholaris* | Branches | China | (Helm et al., 1992) |
| 385 | (−) -(7R,7′R,7′′S,8S,8′S,8′′S)-4′,4′′-dihydroxy-3,3′,3′′,5-tetramethoxy-7,9 ′:7′,9-diepoxy-4,8′′ -oxy-8,8′-sesquineolignan-7′′,9′′ -diol | C31H36O11 | *A. scholaris* | Branches | China | (Xiong et al., 2011) |
| 386 |  | (−) -(7R,7′R,7′′S,8S,8′S,8′′S)-4′,4′′-dihydroxy-3,3′,3′′,5,5′-pentamethoxy-7,9′:7′,9-diepoxy-4,8′′-oxy-8,8′-sesquineolignan-7′′,9′′-diol | C32H38O12 | *A. scholaris* | Branches | China | (Xiong et al., 2011) |
| 387 | (−) -(7R,7′R,7′′R,8S,8′S,8′′S)-4′,4′′-dihydroxy-3,3′,3′′,5- tetramethoxy-7,9′:7′,9-diepoxy-4,8′′-oxy-8,8′-sesquineolignan-7′′,9′′ -diol | C31H36O11 | *A. scholaris* | Branches | China | (Xiong et al., 2011) |
| 388 | (−) -(7R,7′R,7′′R,8S,8′S,8′′S)-4′,4′′-dihydroxy-3,3′,3′′,5,5′ pentamethoxy-7,9′:7′,9-diepoxy-4,8′′-oxy-8,8′-sesquineolignan-7′′,9′′ -diol | C32H38O12 | *A. scholaris* | Branches | China | (Xiong et al., 2011) |
| No. | Type | Name | Formula | Species | Plant parts | Sites | Reference |
| 389 | Lignan | (-)-Lyoniresinol 3*-O-β-D-*  glucopyranoside | C29H40O12 | *A. scholaris* | Leaves | Thailand | (El-Askary et al., 2012) |
| 390 | (+)-Lyoniresinol 3*-O-β-D-*  glucopyranoside | C29H40O12 | *A. scholaris* | Leaves | Thailand | (El-Askary et al., 2012) |
| 391 | Tetrahydro-4-(7-hydroxy-10-methoxy-6, 14-dimethyl-15-m-tolylpentadec-13-enyl) pyran-2-one | C6H10O3 | A. boonei | Stem barks | Nigeria | (Olanlokun et al., 2020) |
| 392 | Ester | Isobutyryl acetate | C30H48O4 | A. boonei | Stem barks | Nigeria | (Olanlokun et al., 2020) |

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