

Appendix 3

Siderophores and their producing organisms grouped according to their main ecological habitat

Siderophore and habitat	Organism
SOIL AND SURFACE WATER	
Agrobactin	<i>Agrobacterium tumefaciens</i>
Aminochelin	<i>Azotobacter vinelandii</i>
Amonabactins	<i>Aeromonas hydrophila</i>
Amycolachrom	<i>Amycolatopsis orientalis</i> , <i>A. azurea</i> , <i>A. mediterranei</i>
Anachelins	<i>Anabaena cylindrica</i>
Asperchrome	<i>Aspergillus</i> sp.
Arthrobactin	<i>Arthrobacter pascens</i>
Azotochelin	<i>Azotobacter vinelandii</i>
Azoverdin	<i>Azomonas macrocytogenes</i>
Carboxymycobactin	<i>Mycobacterium</i> sp.
Cepabactin	<i>Burkholderia cepacia</i>
Coprogen	<i>Penicillium</i> sp., <i>Neurospora</i> sp.
Corrugatin	<i>Pseudomonas corrugata</i>
Corynebactin	<i>Corynebacterium glutamicum</i> , <i>Bacillus subtilis</i>
Enantio-Rhizoferrin	<i>Ralstonia pickettii</i>
Enterobactin	<i>Klebsiella</i> sp., <i>Enterobacter</i> sp., <i>Erwinia</i> sp.
Exochelin	<i>Mycobacterium</i> sp.
Ferribactin	<i>Pseudomonas fluorescens</i>
Ferrichromes	<i>Aspergillus</i> sp., <i>Penicillium</i> sp., <i>Ustilago</i> sp.
Ferrioxamines (A to H)	<i>Streptomyces pilosus</i> , <i>S. griseus</i> , <i>S. griseoflavus</i> , <i>S. aureofaciens</i> , <i>S. coelicolor</i> , <i>S. lavendulae</i> , <i>S. olivaceus</i> , etc.
Ferrioxamines (D ₂ , E and G)	<i>Enterobacter agglomerans</i> , <i>E. cloacae</i> , <i>E. intermedium</i> , <i>Ewingella americana</i> , <i>Pantoea agglomerans</i> , <i>P. dispersa</i> , <i>Hafnia alvei</i>
Fusarines	<i>Aspergillus</i> sp., <i>Penicillium</i> sp., <i>Fusarium</i> sp.
Heterobactins (A and B)	<i>Rhodococcus erythropolis</i>
Itoic acid	<i>Bacillus subtilis</i>

Maduraferrin *Actinomadura madurae*

Siderophore and habitat	Organism
Mycobactin	<i>Mycobacterium</i> sp.
Myxochelins	<i>Angiococcus disciformis</i>
Nannochelins	<i>Nannocystis excedens</i>
Nocobactins	<i>Nocardia</i> sp.
Ornibactins (C ₄ , C ₆ and C ₈)	<i>Burkholderia cepacia</i> , <i>B. vietnamiensis</i>
Parabactin	<i>Paracoccus denitrificans</i>
Protochelin	<i>Azotobacter vinelandii</i>
Pyochelin	<i>Pseudomonas</i> sp.
Pyoverdines	<i>Pseudomonas</i> sp.
Rhizoferrin	<i>Zygomycetes</i> sp.
Quinolobactin	<i>Pseudomonas fluorescens</i>
Schizokinen	<i>Bacillus megaterium</i> , <i>Anabaena</i> sp., <i>Ralstonia solanacearum</i>
Serratiochelin	<i>Serratia marcescens</i>

PLANT PATHOGENS AND PLANT-ASSOCIATED BACTERIA

Achromobactin	<i>Erwinia chrysanthemi</i>
Chrysobactin	<i>Erwinia chrysanthemi</i> , <i>E. carotovora</i> subsp. <i>Carotovora</i>
Ferrioxamines (D ₂ , E and G)	<i>Erwinia</i> sp.
Protochelin	<i>Azotobacter vinelandii</i>
Pyoverdines	<i>Pseudomonas</i> sp. (rhizosphere)
Rhizobactin 1021	<i>Rhizobium meliloti</i>
Vicibactin	<i>Rhizobium leguminosarum</i>

MARINE BACTERIA

Aerobactin	<i>Vibrio hollisae</i> , <i>V. mimicus</i>
Alterobactins (A and B)	<i>Alteromonas luteoviolacea</i>
Amphibactins	<i>Vibrio</i> sp.
Anguibactin	<i>Vibrio anguillarum</i>
Aquachelins (A to D)	<i>Halomonas</i> sp.
Bacillibactin	<i>Bacillus</i> sp.
Bisucaberin	<i>Alteromonas haloplanktis</i> , <i>Vibrio salmonicida</i>

Ferrioxamine G	<i>Vibrio</i> sp.
Siderophore and habitat	Organism
Fluvibactin	<i>Vibrio fluvialis</i>
Marinobactins (A to E)	<i>Marinobacter</i> sp.
Petrobactin	<i>Marinobacter hydrocarbonoclasticus</i>
Vibrioferrin	<i>Vibrio parahaemolyticus</i>
Vulnibactin	<i>Vibrio vulnificus</i>
ANIMAL PATHOGENS	
Acinetobactin	<i>Acinetobacter baumannii</i> , <i>A. haemolyticus</i>
Acinetoferrin	<i>Acinetobacter haemolyticus</i>
Aerobactin	<i>Escherichia coli</i> , <i>Shigella flexneri</i> , <i>S. boydii</i> , <i>Salmonella</i> sp., <i>Yersinia enterocolitica</i>
Alcaligin	<i>Bordetella pertussis</i> , <i>B. bronchiseptica</i>
Bisucaberin	<i>Vibrio salmonicida</i>
Carboxymycobactins	<i>Mycobacterium tuberculosis</i> , <i>M. avium</i> , <i>M. bovis</i>
Enterobactin	<i>Escherichia coli</i> , <i>Klebsiella</i> sp., <i>Salmonella enterica</i> serotype Typhimurium, <i>Salmonella</i> sp., <i>Serratia marcescens</i> , <i>Shigella dysenteriae</i> , <i>S. Sonnei</i>
Exochelins	<i>Mycobacterium tuberculosis</i> , <i>Mycobacterium</i> sp.
Mycobactins	<i>Mycobacterium tuberculosis</i> , <i>M. avium</i> , <i>M. bvis</i>
Ornibactins	<i>Burkholderia cepacia</i>
Pyoverdines	<i>Pseudomonas aeruginosa</i>
Schizokinen	<i>Bacillus megaterium</i>
Salmochelins	<i>Salmonella enterica</i> , <i>Escherichia coli</i> (uropathogenic)
Staphyloferrin (A, B)	<i>Staphylococcus aureus</i> , <i>S. hyicus</i>
Vibriobactin	<i>Vibrio cholerae</i>
Yersiniabactin	<i>Yersinia enterocolitica</i> , <i>Y. pestis</i>

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ASM press, Washington, 2004, pp 437-450