== Evaluation Info

Classifier meka.classifiers.multilabel.BCC

Options [-X, Ibf, -S, 0, -W, weka.classifiers.trees.J48, --, -C, 0.25, -M, 2]

Additional Info [0, 7, 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15]

Dataset peptides

Number of labels (L) 16

Type ML-CV

Threshold 0.5

Verbosity 3

== Predictive Performance

Number of test instances (N)

Accuracy 0.702

Jaccard index 0.702

Hamming score 0.956

Exact match 0.572

Jaccard distance 0.298

Hamming loss 0.044

ZeroOne loss 0.428

Harmonic score 0.801

One error 0.27

Rank loss 0.103

Avg precision 0.161

Log Loss (lim. L) 0.123

Log Loss (lim. D) 0.348

F1 (micro averaged) 0.837

F1 (macro averaged by example) 0.745

F1 (macro averaged by label) 0.784

AUPRC (macro averaged) 0.646

AUROC (macro averaged) 0.877

Curve Data

Macro Curve Data

Micro Curve Data

Label indices [ 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 ]

Accuracy (per label) [ 0.990 0.989 0.990 0.981 0.794 0.997 0.990 0.832 0.981 0.984 0.957 0.937 0.939 0.956 0.985 0.991 ]

Empty labelvectors (predicted) 0.036

Label cardinality (predicted) 2.245

Levenshtein distance 0.044

== Additional Measurements (averaged across folds)

Number of training instances 2618

Number of test instances 2618

Label cardinality (train set) 2.099

Label cardinality (test set) 2.099

Build Time 6.604

Test Time 0.016

Total Time 6.62

== Evaluation Info

Classifier meka.classifiers.multilabel.CC

Options [-S, 0, -W, weka.classifiers.trees.J48, --, -C, 0.25, -M, 2]

Additional Info [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

Dataset peptides

Number of labels (L) 16

Type ML-CV

Threshold 0.5

Verbosity 3

== Predictive Performance

Number of test instances (N)

Accuracy 0.703

Jaccard index 0.703

Hamming score 0.953

Exact match 0.585

Jaccard distance 0.297

Hamming loss 0.047

ZeroOne loss 0.415

Harmonic score 0.797

One error 0.265

Rank loss 0.109

Avg precision 0.162

Log Loss (lim. L) 0.129

Log Loss (lim. D) 0.366

F1 (micro averaged) 0.829

F1 (macro averaged by example) 0.744

F1 (macro averaged by label) 0.769

AUPRC (macro averaged) 0.624

AUROC (macro averaged) 0.866

Curve Data

Macro Curve Data

Micro Curve Data

Label indices [ 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 ]

Accuracy (per label) [ 0.990 0.989 0.990 0.982 0.803 0.997 0.989 0.825 0.982 0.982 0.947 0.927 0.933 0.947 0.983 0.989 ]

Empty labelvectors (predicted) 0.023

Label cardinality (predicted) 2.249

Levenshtein distance 0.046

== Additional Measurements (averaged across folds)

Number of training instances 2618

Number of test instances 2618

Label cardinality (train set) 2.099

Label cardinality (test set) 2.099

Build Time 6.689

Test Time 0.015

Total Time 6.704

== Evaluation Info

Classifier meka.classifiers.multilabel.meta.EnsembleML

Options [-S, 1, -I, 10, -P, 67, -W, meka.classifiers.multilabel.CC, --, -S, 0, -W, weka.classifiers.trees.J48, --, -C, 0.25, -M, 2]

Additional Info

Dataset peptides

Number of labels (L) 16

Type ML-CV

Threshold 0.5

Verbosity 3

== Predictive Performance

Number of test instances (N)

Accuracy 0.765

Jaccard index 0.765

Hamming score 0.965

Exact match 0.638

Jaccard distance 0.235

Hamming loss 0.035

ZeroOne loss 0.362

Harmonic score 0.857

One error 0.153

Rank loss 0.034

Avg precision 0.211

Log Loss (lim. L) 0.093

Log Loss (lim. D) 0.11

F1 (micro averaged) 0.871

F1 (macro averaged by example) 0.806

F1 (macro averaged by label) 0.792

AUPRC (macro averaged) 0.841

AUROC (macro averaged) 0.94

Curve Data

Macro Curve Data

Micro Curve Data

Label indices [ 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 ]

Accuracy (per label) [ 0.994 0.992 0.990 0.986 0.812 0.996 0.992 0.860 0.987 0.994 0.976 0.957 0.958 0.973 0.989 0.992 ]

Empty labelvectors (predicted) 0.012

Label cardinality (predicted) 2.188

Levenshtein distance 0.034

== Additional Measurements (averaged across folds)

Number of training instances 2618

Number of test instances 2618

Label cardinality (train set) 2.099

Label cardinality (test set) 2.099

Build Time 285.766

Test Time 0.181

Total Time 285.947

== Model info

Model

meka.classifiers.multilabel.BCC: Node #1

J48 pruned tree

------------------

Feature187 <= 91.176471

| Feature120 <= 91.111111

| | Feature13 <= 21.95122

| | | Feature154 <= 30.882353: 0 (51.0)

| | | Feature154 > 30.882353

| | | | Feature13 <= 2.816901: 1 (10.0)

| | | | Feature13 > 2.816901: 0 (4.0)

| | Feature13 > 21.95122: 1 (4.0)

| Feature120 > 91.111111

| | Feature40 <= 86.486486

| | | Feature128 <= 68.75

| | | | Feature2 <= 13.793103

| | | | | Feature7 <= 13.636364: 0 (1200.0)

| | | | | Feature7 > 13.636364

| | | | | | Feature150 <= 39.534884: 0 (38.0/1.0)

| | | | | | Feature150 > 39.534884: 1 (4.0)

| | | | Feature2 > 13.793103

| | | | | Feature80 <= 24.285714: 0 (244.0/1.0)

| | | | | Feature80 > 24.285714

| | | | | | Feature5 <= 2.439024

| | | | | | | Feature21 <= 25.806452

| | | | | | | | Feature152 <= 34.883721: 1 (13.0)

| | | | | | | | Feature152 > 34.883721: 0 (3.0)

| | | | | | | Feature21 > 25.806452: 0 (9.0)

| | | | | | Feature5 > 2.439024: 0 (34.0)

| | | Feature128 > 68.75

| | | | Feature173 <= 22.727273

| | | | | Feature166 <= 76.744186: 0 (33.0)

| | | | | Feature166 > 76.744186

| | | | | | Feature137 <= 65.384615: 0 (3.0)

| | | | | | Feature137 > 65.384615: 1 (4.0)

| | | | Feature173 > 22.727273: 1 (3.0)

| | Feature40 > 86.486486

| | | Feature168 <= 62.857143: 0 (32.0)

| | | Feature168 > 62.857143: 1 (7.0)

Feature187 > 91.176471

| Feature5 <= 10.25641

| | Feature7 <= 6.299213: 0 (19.0)

| | Feature7 > 6.299213: 1 (2.0)

| Feature5 > 10.25641: 1 (10.0)

Number of Leaves : 21

Size of the tree : 41

meka.classifiers.multilabel.BCC: Node #2

J48 pruned tree

------------------

Feature133 <= 46.666667

| Feature97 <= 73.529412

| | Feature84 <= 48

| | | Feature171 <= 6.25

| | | | Feature137 <= 7.692308: 1 (4.0)

| | | | Feature137 > 7.692308: 0 (28.0)

| | | Feature171 > 6.25: 0 (1569.0/6.0)

| | Feature84 > 48

| | | Feature47 <= 18.518519

| | | | Feature143 <= 38.461538: 0 (59.0)

| | | | Feature143 > 38.461538

| | | | | Feature6 <= 18.518519: 0 (2.0)

| | | | | Feature6 > 18.518519: 1 (2.0)

| | | Feature47 > 18.518519: 1 (8.0)

| Feature97 > 73.529412

| | Feature121 <= 79.487179: 0 (22.0)

| | Feature121 > 79.487179: 1 (8.0)

Feature133 > 46.666667

| Feature147 <= 63.157895: 0 (14.0)

| Feature147 > 63.157895: 1 (11.0)

Number of Leaves : 11

Size of the tree : 21

meka.classifiers.multilabel.BCC: Node #3

J48 pruned tree

------------------

Feature60 <= 77.419355

| Feature9 <= 17.241379

| | antibacterial-peptides = 0

| | | Feature17 <= 10.810811: 0 (256.0/2.0)

| | | Feature17 > 10.810811

| | | | Feature112 <= 11.904762

| | | | | Feature109 <= 3.448276: 0 (22.0)

| | | | | Feature109 > 3.448276: 1 (2.0)

| | | | Feature112 > 11.904762: 1 (3.0)

| | antibacterial-peptides = 1: 0 (1129.0)

| Feature9 > 17.241379

| | Feature37 <= 7.8125

| | | Feature67 <= 27.102804

| | | | Feature98 <= 79.310345

| | | | | Feature151 <= 17.741935

| | | | | | Feature126 <= 26.086957: 0 (5.0)

| | | | | | Feature126 > 26.086957: 1 (16.0/1.0)

| | | | | Feature151 > 17.741935

| | | | | | Feature47 <= 29.62963: 0 (36.0)

| | | | | | Feature47 > 29.62963: 1 (2.0)

| | | | Feature98 > 79.310345: 1 (11.0)

| | | Feature67 > 27.102804

| | | | Feature9 <= 17.391304

| | | | | Feature15 <= 3.225806: 0 (3.0)

| | | | | Feature15 > 3.225806: 1 (2.0)

| | | | Feature9 > 17.391304: 0 (75.0)

| | Feature37 > 7.8125: 0 (132.0)

Feature60 > 77.419355

| Feature139 <= 48: 0 (18.0)

| Feature139 > 48

| | antibacterial-peptides = 0: 0 (5.0/1.0)

| | antibacterial-peptides = 1

| | | Feature33 <= 12.903226: 0 (2.0)

| | | Feature33 > 12.903226: 1 (8.0)

Number of Leaves : 18

Size of the tree : 35

meka.classifiers.multilabel.BCC: Node #4

J48 pruned tree

------------------

Feature116 <= 1.492537

| Feature6 <= 5.633803

| | Feature2 <= 7.142857

| | | Feature2 <= 0.943396: 0 (3.0)

| | | Feature2 > 0.943396

| | | | Feature107 <= 12.121212: 1 (51.0/1.0)

| | | | Feature107 > 12.121212

| | | | | Feature5 <= 6.122449: 0 (3.0)

| | | | | Feature5 > 6.122449: 1 (2.0)

| | Feature2 > 7.142857: 0 (10.0)

| Feature6 > 5.633803

| | Feature173 <= 21.276596: 0 (83.0/1.0)

| | Feature173 > 21.276596: 1 (5.0/1.0)

Feature116 > 1.492537

| Feature40 <= 86

| | Feature21 <= 39.534884

| | | Feature23 <= 53.846154

| | | | Feature163 <= 2.739726

| | | | | Feature88 <= 5.454545

| | | | | | Feature24 <= 18.181818: 0 (4.0)

| | | | | | Feature24 > 18.181818: 1 (6.0)

| | | | | Feature88 > 5.454545

| | | | | | Feature58 <= 2.272727

| | | | | | | Feature120 <= 97.87234: 1 (2.0)

| | | | | | | Feature120 > 97.87234: 0 (5.0)

| | | | | | Feature58 > 2.272727: 0 (128.0)

| | | | Feature163 > 2.739726

| | | | | Feature88 <= 36.666667: 0 (1071.0/1.0)

| | | | | Feature88 > 36.666667

| | | | | | Feature56 <= 83.333333: 0 (22.0)

| | | | | | Feature56 > 83.333333: 1 (3.0)

| | | Feature23 > 53.846154

| | | | Feature173 <= 12.727273

| | | | | Feature61 <= 10

| | | | | | Feature15 <= 3.846154

| | | | | | | Feature17 <= 8: 0 (12.0)

| | | | | | | Feature17 > 8: 1 (2.0)

| | | | | | Feature15 > 3.846154: 1 (4.0)

| | | | | Feature61 > 10: 0 (74.0)

| | | | Feature173 > 12.727273: 1 (5.0/1.0)

| | Feature21 > 39.534884

| | | Feature29 <= 58.823529

| | | | Feature56 <= 83.333333

| | | | | Feature35 <= 86.486486: 0 (145.0)

| | | | | Feature35 > 86.486486

| | | | | | Feature165 <= 42.5: 1 (3.0)

| | | | | | Feature165 > 42.5: 0 (9.0)

| | | | Feature56 > 83.333333

| | | | | Feature37 <= 9.375: 1 (5.0)

| | | | | Feature37 > 9.375: 0 (6.0)

| | | Feature29 > 58.823529

| | | | Feature40 <= 50: 0 (9.0)

| | | | Feature40 > 50: 1 (9.0)

| Feature40 > 86

| | Feature2 <= 19.354839: 0 (34.0)

| | Feature2 > 19.354839: 1 (12.0)

Number of Leaves : 29

Size of the tree : 57

meka.classifiers.multilabel.BCC: Node #5

J48 pruned tree

------------------

Feature36 <= 35.714286: 0 (34.0)

Feature36 > 35.714286

| Feature105 <= 9.090909

| | Feature134 <= 24.390244: 0 (29.0)

| | Feature134 > 24.390244

| | | Feature124 <= 63.043478

| | | | Feature149 <= 17.777778

| | | | | Feature135 <= 73.214286: 1 (12.0)

| | | | | Feature135 > 73.214286: 0 (2.0)

| | | | Feature149 > 17.777778

| | | | | Feature60 <= 65.714286

| | | | | | Feature82 <= 86.842105

| | | | | | | Feature106 <= 86.486486

| | | | | | | | Feature165 <= 37.878788: 0 (7.0)

| | | | | | | | Feature165 > 37.878788

| | | | | | | | | Feature20 <= 8.490566: 1 (19.0/1.0)

| | | | | | | | | Feature20 > 8.490566: 0 (2.0)

| | | | | | | Feature106 > 86.486486

| | | | | | | | Feature148 <= 38.709677

| | | | | | | | | Feature107 <= 2.941176

| | | | | | | | | | Feature30 <= 65

| | | | | | | | | | | Feature149 <= 27.5: 0 (25.0/1.0)

| | | | | | | | | | | Feature149 > 27.5

| | | | | | | | | | | | Feature11 <= 5.263158

| | | | | | | | | | | | | Feature47 <= 22.5

| | | | | | | | | | | | | | Feature56 <= 33.333333: 1 (4.0)

| | | | | | | | | | | | | | Feature56 > 33.333333

| | | | | | | | | | | | | | | Feature49 <= 6.451613: 1 (3.0)

| | | | | | | | | | | | | | | Feature49 > 6.451613

| | | | | | | | | | | | | | | | Feature108 <= 12.903226: 0 (22.0)

| | | | | | | | | | | | | | | | Feature108 > 12.903226

| | | | | | | | | | | | | | | | | Feature6 <= 21.73913

| | | | | | | | | | | | | | | | | | antibacterial-peptides = 0: 1 (3.0/1.0)

| | | | | | | | | | | | | | | | | | antibacterial-peptides = 1: 0 (11.0)

| | | | | | | | | | | | | | | | | Feature6 > 21.73913: 1 (3.0)

| | | | | | | | | | | | | Feature47 > 22.5: 1 (6.0)

| | | | | | | | | | | | Feature11 > 5.263158: 1 (9.0)

| | | | | | | | | | Feature30 > 65: 1 (8.0)

| | | | | | | | | Feature107 > 2.941176

| | | | | | | | | | Feature36 <= 89.655172: 1 (3.0)

| | | | | | | | | | Feature36 > 89.655172: 0 (40.0)

| | | | | | | | Feature148 > 38.709677: 0 (41.0)

| | | | | | Feature82 > 86.842105

| | | | | | | Feature6 <= 5.128205: 0 (3.0)

| | | | | | | Feature6 > 5.128205: 1 (16.0/1.0)

| | | | | Feature60 > 65.714286: 0 (24.0)

| | | Feature124 > 63.043478: 0 (23.0)

| Feature105 > 9.090909

| | Feature153 <= 1.666667

| | | Feature145 <= 59.52381: 1 (7.0)

| | | Feature145 > 59.52381

| | | | Feature4 <= 8.823529

| | | | | Feature137 <= 0.900901

| | | | | | Feature14 <= 3.030303: 0 (3.0)

| | | | | | Feature14 > 3.030303: 1 (5.0)

| | | | | Feature137 > 0.900901

| | | | | | Feature8 <= 3.225806

| | | | | | | Feature8 <= 2.247191: 0 (9.0/1.0)

| | | | | | | Feature8 > 2.247191: 1 (3.0)

| | | | | | Feature8 > 3.225806: 0 (53.0)

| | | | Feature4 > 8.823529

| | | | | Feature61 <= 74.137931: 1 (9.0)

| | | | | Feature61 > 74.137931: 0 (2.0)

| | Feature153 > 1.666667

| | | Feature17 <= 11.764706

| | | | Feature55 <= 70.588235

| | | | | Feature105 <= 35

| | | | | | Feature12 <= 1.886792

| | | | | | | Feature151 <= 32.142857

| | | | | | | | Feature56 <= 78.512397

| | | | | | | | | Feature145 <= 76.153846

| | | | | | | | | | Feature48 <= 33.333333

| | | | | | | | | | | Feature116 <= 7.5

| | | | | | | | | | | | Feature161 <= 39.130435

| | | | | | | | | | | | | Feature35 <= 72.972973: 0 (14.0/1.0)

| | | | | | | | | | | | | Feature35 > 72.972973: 1 (4.0)

| | | | | | | | | | | | Feature161 > 39.130435

| | | | | | | | | | | | | Feature105 <= 29.72973

| | | | | | | | | | | | | | Feature43 <= 42.857143

| | | | | | | | | | | | | | | Feature42 <= 23.255814: 0 (11.0/1.0)

| | | | | | | | | | | | | | | Feature42 > 23.255814

| | | | | | | | | | | | | | | | Feature57 <= 78.195489

| | | | | | | | | | | | | | | | | Feature65 <= 17.391304

| | | | | | | | | | | | | | | | | | Feature14 <= 0.943396: 0 (3.0)

| | | | | | | | | | | | | | | | | | Feature14 > 0.943396: 1 (2.0)

| | | | | | | | | | | | | | | | | Feature65 > 17.391304: 1 (37.0/1.0)

| | | | | | | | | | | | | | | | Feature57 > 78.195489

| | | | | | | | | | | | | | | | | Feature188 <= 98.113208

| | | | | | | | | | | | | | | | | | Feature85 <= 53.333333

| | | | | | | | | | | | | | | | | | | Feature96 <= 28.971963

| | | | | | | | | | | | | | | | | | | | Feature109 <= 3.389831

| | | | | | | | | | | | | | | | | | | | | Feature174 <= 6.060606

| | | | | | | | | | | | | | | | | | | | | | Feature41 <= 98.850575: 1 (41.0)

| | | | | | | | | | | | | | | | | | | | | | Feature41 > 98.850575

| | | | | | | | | | | | | | | | | | | | | | | Feature148 <= 23.943662: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | | | Feature148 > 23.943662

| | | | | | | | | | | | | | | | | | | | | | | | Feature60 <= 64.285714: 1 (32.0/2.0)

| | | | | | | | | | | | | | | | | | | | | | | | Feature60 > 64.285714: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | Feature174 > 6.060606

| | | | | | | | | | | | | | | | | | | | | | Feature4 <= 3.571429: 0 (4.0)

| | | | | | | | | | | | | | | | | | | | | | Feature4 > 3.571429: 1 (2.0)

| | | | | | | | | | | | | | | | | | | | Feature109 > 3.389831

| | | | | | | | | | | | | | | | | | | | | Feature153 <= 4.109589: 1 (11.0)

| | | | | | | | | | | | | | | | | | | | | Feature153 > 4.109589

| | | | | | | | | | | | | | | | | | | | | | Feature142 <= 13.333333

| | | | | | | | | | | | | | | | | | | | | | | Feature6 <= 6.25: 1 (2.0)

| | | | | | | | | | | | | | | | | | | | | | | Feature6 > 6.25: 0 (17.0)

| | | | | | | | | | | | | | | | | | | | | | Feature142 > 13.333333: 1 (4.0)

| | | | | | | | | | | | | | | | | | | Feature96 > 28.971963

| | | | | | | | | | | | | | | | | | | | antibacterial-peptides = 0: 1 (2.0)

| | | | | | | | | | | | | | | | | | | | antibacterial-peptides = 1: 0 (10.0/1.0)

| | | | | | | | | | | | | | | | | | Feature85 > 53.333333: 0 (9.0/1.0)

| | | | | | | | | | | | | | | | | Feature188 > 98.113208

| | | | | | | | | | | | | | | | | | Feature12 <= 1.408451: 0 (18.0)

| | | | | | | | | | | | | | | | | | Feature12 > 1.408451: 1 (3.0)

| | | | | | | | | | | | | | Feature43 > 42.857143: 1 (23.0)

| | | | | | | | | | | | | Feature105 > 29.72973: 1 (22.0)

| | | | | | | | | | | Feature116 > 7.5

| | | | | | | | | | | | Feature85 <= 31.372549: 0 (3.0)

| | | | | | | | | | | | Feature85 > 31.372549

| | | | | | | | | | | | | Feature21 <= 15.625: 0 (3.0/1.0)

| | | | | | | | | | | | | Feature21 > 15.625: 1 (53.0/1.0)

| | | | | | | | | | Feature48 > 33.333333

| | | | | | | | | | | Feature81 <= 32.432432

| | | | | | | | | | | | Feature34 <= 37.037037: 0 (2.0)

| | | | | | | | | | | | Feature34 > 37.037037: 1 (8.0/1.0)

| | | | | | | | | | | Feature81 > 32.432432: 0 (10.0)

| | | | | | | | | Feature145 > 76.153846

| | | | | | | | | | Feature82 <= 75.471698

| | | | | | | | | | | Feature7 <= 7.142857

| | | | | | | | | | | | Feature11 <= 14.285714: 0 (23.0/1.0)

| | | | | | | | | | | | Feature11 > 14.285714: 1 (2.0)

| | | | | | | | | | | Feature7 > 7.142857: 1 (3.0)

| | | | | | | | | | Feature82 > 75.471698: 1 (7.0)

| | | | | | | | Feature56 > 78.512397

| | | | | | | | | Feature72 <= 80: 1 (49.0/1.0)

| | | | | | | | | Feature72 > 80: 0 (6.0/1.0)

| | | | | | | Feature151 > 32.142857

| | | | | | | | Feature11 <= 5.747126

| | | | | | | | | Feature138 <= 37.142857

| | | | | | | | | | Feature125 <= 92.792793

| | | | | | | | | | | Feature156 <= 81.818182

| | | | | | | | | | | | antibacterial-peptides = 0

| | | | | | | | | | | | | Feature35 <= 64.516129: 0 (5.0)

| | | | | | | | | | | | | Feature35 > 64.516129: 1 (2.0)

| | | | | | | | | | | | antibacterial-peptides = 1: 0 (29.0)

| | | | | | | | | | | Feature156 > 81.818182: 1 (3.0)

| | | | | | | | | | Feature125 > 92.792793: 1 (6.0/1.0)

| | | | | | | | | Feature138 > 37.142857: 1 (6.0)

| | | | | | | | Feature11 > 5.747126: 1 (7.0)

| | | | | | Feature12 > 1.886792

| | | | | | | Feature172 <= 34.375

| | | | | | | | Feature97 <= 35.714286

| | | | | | | | | antibacterial-peptides = 0

| | | | | | | | | | Feature1 <= 3.846154: 1 (4.0)

| | | | | | | | | | Feature1 > 3.846154: 0 (2.0)

| | | | | | | | | antibacterial-peptides = 1

| | | | | | | | | | Feature50 <= 32: 1 (3.0)

| | | | | | | | | | Feature50 > 32

| | | | | | | | | | | Feature141 <= 80

| | | | | | | | | | | | Feature7 <= 1.666667: 0 (2.0)

| | | | | | | | | | | | Feature7 > 1.666667: 1 (3.0)

| | | | | | | | | | | Feature141 > 80: 0 (39.0/1.0)

| | | | | | | | Feature97 > 35.714286

| | | | | | | | | Feature19 <= 2.631579

| | | | | | | | | | Feature3 <= 1.754386

| | | | | | | | | | | Feature121 <= 85

| | | | | | | | | | | | Feature148 <= 15.09434

| | | | | | | | | | | | | Feature8 <= 4.938272: 0 (8.0)

| | | | | | | | | | | | | Feature8 > 4.938272: 1 (4.0)

| | | | | | | | | | | | Feature148 > 15.09434

| | | | | | | | | | | | | Feature3 <= 0

| | | | | | | | | | | | | | Feature185 <= 24

| | | | | | | | | | | | | | | Feature96 <= 12.121212

| | | | | | | | | | | | | | | | Feature6 <= 13.513514: 0 (4.0)

| | | | | | | | | | | | | | | | Feature6 > 13.513514: 1 (2.0)

| | | | | | | | | | | | | | | Feature96 > 12.121212

| | | | | | | | | | | | | | | | Feature138 <= 6.060606

| | | | | | | | | | | | | | | | | Feature18 <= 6: 1 (5.0)

| | | | | | | | | | | | | | | | | Feature18 > 6: 0 (4.0)

| | | | | | | | | | | | | | | | Feature138 > 6.060606

| | | | | | | | | | | | | | | | | Feature153 <= 21.212121

| | | | | | | | | | | | | | | | | | Feature137 <= 3.571429

| | | | | | | | | | | | | | | | | | | Feature55 <= 38.961039: 0 (2.0)

| | | | | | | | | | | | | | | | | | | Feature55 > 38.961039: 1 (7.0)

| | | | | | | | | | | | | | | | | | Feature137 > 3.571429: 1 (84.0)

| | | | | | | | | | | | | | | | | Feature153 > 21.212121

| | | | | | | | | | | | | | | | | | Feature35 <= 55.882353: 1 (5.0)

| | | | | | | | | | | | | | | | | | Feature35 > 55.882353: 0 (3.0)

| | | | | | | | | | | | | | Feature185 > 24

| | | | | | | | | | | | | | | Feature165 <= 45.454545: 1 (7.0/1.0)

| | | | | | | | | | | | | | | Feature165 > 45.454545: 0 (6.0)

| | | | | | | | | | | | | Feature3 > 0: 1 (8.0)

| | | | | | | | | | | Feature121 > 85: 0 (9.0/1.0)

| | | | | | | | | | Feature3 > 1.754386

| | | | | | | | | | | Feature168 <= 60.526316

| | | | | | | | | | | | Feature172 <= 30.30303

| | | | | | | | | | | | | Feature120 <= 97.222222

| | | | | | | | | | | | | | Feature53 <= 4.444444: 1 (2.0)

| | | | | | | | | | | | | | Feature53 > 4.444444: 0 (14.0)

| | | | | | | | | | | | | Feature120 > 97.222222

| | | | | | | | | | | | | | Feature122 <= 18.333333

| | | | | | | | | | | | | | | Feature147 <= 29.032258

| | | | | | | | | | | | | | | | Feature14 <= 5.747126: 0 (14.0)

| | | | | | | | | | | | | | | | Feature14 > 5.747126: 1 (2.0)

| | | | | | | | | | | | | | | Feature147 > 29.032258

| | | | | | | | | | | | | | | | Feature157 <= 88.235294: 0 (10.0/1.0)

| | | | | | | | | | | | | | | | Feature157 > 88.235294

| | | | | | | | | | | | | | | | | Feature174 <= 1.333333

| | | | | | | | | | | | | | | | | | Feature120 <= 99.328859: 1 (2.0)

| | | | | | | | | | | | | | | | | | Feature120 > 99.328859: 0 (10.0)

| | | | | | | | | | | | | | | | | Feature174 > 1.333333

| | | | | | | | | | | | | | | | | | Feature162 <= 84.210526

| | | | | | | | | | | | | | | | | | | Feature7 <= 3.225806: 0 (8.0)

| | | | | | | | | | | | | | | | | | | Feature7 > 3.225806: 1 (2.0)

| | | | | | | | | | | | | | | | | | Feature162 > 84.210526

| | | | | | | | | | | | | | | | | | | Feature168 <= 38.181818: 1 (27.0)

| | | | | | | | | | | | | | | | | | | Feature168 > 38.181818

| | | | | | | | | | | | | | | | | | | | Feature164 <= 25.19685

| | | | | | | | | | | | | | | | | | | | | Feature146 <= 87.5: 0 (5.0)

| | | | | | | | | | | | | | | | | | | | | Feature146 > 87.5

| | | | | | | | | | | | | | | | | | | | | | Feature8 <= 0: 0 (4.0)

| | | | | | | | | | | | | | | | | | | | | | Feature8 > 0

| | | | | | | | | | | | | | | | | | | | | | | Feature150 <= 19.565217: 1 (14.0)

| | | | | | | | | | | | | | | | | | | | | | | Feature150 > 19.565217

| | | | | | | | | | | | | | | | | | | | | | | | Feature128 <= 33.962264

| | | | | | | | | | | | | | | | | | | | | | | | | antibacterial-peptides = 0

| | | | | | | | | | | | | | | | | | | | | | | | | | Feature39 <= 49.462366: 1 (15.0/1.0)

| | | | | | | | | | | | | | | | | | | | | | | | | | Feature39 > 49.462366: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | | | | | antibacterial-peptides = 1

| | | | | | | | | | | | | | | | | | | | | | | | | | Feature157 <= 94: 1 (5.0)

| | | | | | | | | | | | | | | | | | | | | | | | | | Feature157 > 94

| | | | | | | | | | | | | | | | | | | | | | | | | | | Feature107 <= 14.035088

| | | | | | | | | | | | | | | | | | | | | | | | | | | | Feature89 <= 30.952381: 0 (15.0)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | Feature89 > 30.952381: 1 (3.0/1.0)

| | | | | | | | | | | | | | | | | | | | | | | | | | | Feature107 > 14.035088: 1 (3.0)

| | | | | | | | | | | | | | | | | | | | | | | | Feature128 > 33.962264: 1 (14.0)

| | | | | | | | | | | | | | | | | | | | Feature164 > 25.19685: 1 (13.0)

| | | | | | | | | | | | | | Feature122 > 18.333333

| | | | | | | | | | | | | | | Feature109 <= 1.111111: 1 (4.0)

| | | | | | | | | | | | | | | Feature109 > 1.111111

| | | | | | | | | | | | | | | | antibacterial-peptides = 0: 1 (3.0/1.0)

| | | | | | | | | | | | | | | | antibacterial-peptides = 1

| | | | | | | | | | | | | | | | | Feature125 <= 97.826087: 0 (25.0)

| | | | | | | | | | | | | | | | | Feature125 > 97.826087: 1 (2.0)

| | | | | | | | | | | | Feature172 > 30.30303

| | | | | | | | | | | | | Feature145 <= 53.333333: 0 (2.0)

| | | | | | | | | | | | | Feature145 > 53.333333: 1 (19.0)

| | | | | | | | | | | Feature168 > 60.526316

| | | | | | | | | | | | Feature132 <= 11.764706: 0 (21.0)

| | | | | | | | | | | | Feature132 > 11.764706: 1 (3.0/1.0)

| | | | | | | | | Feature19 > 2.631579

| | | | | | | | | | Feature144 <= 31.632653

| | | | | | | | | | | Feature40 <= 53.333333: 0 (2.0)

| | | | | | | | | | | Feature40 > 53.333333: 1 (15.0)

| | | | | | | | | | Feature144 > 31.632653

| | | | | | | | | | | Feature17 <= 10.526316

| | | | | | | | | | | | Feature148 <= 15.789474: 1 (6.0/1.0)

| | | | | | | | | | | | Feature148 > 15.789474

| | | | | | | | | | | | | Feature137 <= 2.12766: 1 (6.0/1.0)

| | | | | | | | | | | | | Feature137 > 2.12766

| | | | | | | | | | | | | | Feature111 <= 41.666667

| | | | | | | | | | | | | | | antibacterial-peptides = 0

| | | | | | | | | | | | | | | | Feature167 <= 91.666667

| | | | | | | | | | | | | | | | | Feature30 <= 47.058824: 0 (2.0)

| | | | | | | | | | | | | | | | | Feature30 > 47.058824: 1 (5.0)

| | | | | | | | | | | | | | | | Feature167 > 91.666667: 0 (10.0)

| | | | | | | | | | | | | | | antibacterial-peptides = 1

| | | | | | | | | | | | | | | | Feature121 <= 13.333333

| | | | | | | | | | | | | | | | | Feature8 <= 14.285714

| | | | | | | | | | | | | | | | | | Feature4 <= 5.633803: 0 (29.0/1.0)

| | | | | | | | | | | | | | | | | | Feature4 > 5.633803: 1 (4.0/1.0)

| | | | | | | | | | | | | | | | | Feature8 > 14.285714: 1 (3.0)

| | | | | | | | | | | | | | | | Feature121 > 13.333333: 0 (41.0)

| | | | | | | | | | | | | | Feature111 > 41.666667: 1 (6.0/1.0)

| | | | | | | | | | | Feature17 > 10.526316: 1 (6.0)

| | | | | | | Feature172 > 34.375

| | | | | | | | Feature11 <= 4.166667: 0 (28.0/1.0)

| | | | | | | | Feature11 > 4.166667: 1 (2.0)

| | | | | Feature105 > 35

| | | | | | Feature16 <= 2.222222: 0 (19.0)

| | | | | | Feature16 > 2.222222

| | | | | | | Feature68 <= 8.333333: 1 (6.0)

| | | | | | | Feature68 > 8.333333

| | | | | | | | Feature11 <= 3.846154

| | | | | | | | | Feature2 <= 9.52381

| | | | | | | | | | Feature59 <= 10.344828: 1 (2.0)

| | | | | | | | | | Feature59 > 10.344828: 0 (19.0/1.0)

| | | | | | | | | Feature2 > 9.52381: 1 (2.0)

| | | | | | | | Feature11 > 3.846154: 1 (2.0)

| | | | Feature55 > 70.588235

| | | | | Feature33 <= 19.047619: 1 (35.0)

| | | | | Feature33 > 19.047619

| | | | | | Feature99 <= 91.666667: 1 (2.0)

| | | | | | Feature99 > 91.666667: 0 (7.0)

| | | Feature17 > 11.764706

| | | | Feature66 <= 37.5

| | | | | Feature128 <= 47.368421: 0 (36.0)

| | | | | Feature128 > 47.368421: 1 (3.0)

| | | | Feature66 > 37.5

| | | | | Feature1 <= 1.5625: 0 (2.0)

| | | | | Feature1 > 1.5625: 1 (11.0)

Number of Leaves : 152

Size of the tree : 303

meka.classifiers.multilabel.BCC: Node #6

J48 pruned tree

------------------

Feature93 <= 85.714286: 0 (1702.0/2.0)

Feature93 > 85.714286

| Feature142 <= 28.888889: 0 (22.0)

| Feature142 > 28.888889: 1 (3.0)

Number of Leaves : 3

Size of the tree : 5

meka.classifiers.multilabel.BCC: Node #7

J48 pruned tree

------------------

Feature51 <= 83.783784

| Feature151 <= 9.090909

| | Feature28 <= 25.925926: 0 (134.0/1.0)

| | Feature28 > 25.925926

| | | Feature160 <= 55.882353

| | | | Feature105 <= 14.285714: 1 (2.0)

| | | | Feature105 > 14.285714: 0 (13.0)

| | | Feature160 > 55.882353: 1 (9.0)

| Feature151 > 9.090909

| | Feature13 <= 15

| | | Feature99 <= 87.096774

| | | | Feature99 <= 85.365854: 0 (115.0)

| | | | Feature99 > 85.365854

| | | | | Feature60 <= 63.636364: 0 (29.0/1.0)

| | | | | Feature60 > 63.636364: 1 (4.0)

| | | Feature99 > 87.096774: 0 (1290.0/2.0)

| | Feature13 > 15

| | | Feature97 <= 53.658537: 0 (52.0)

| | | Feature97 > 53.658537

| | | | Feature188 <= 96.73913: 1 (5.0)

| | | | Feature188 > 96.73913: 0 (6.0)

Feature51 > 83.783784

| Feature38 <= 10.25641

| | Feature171 <= 39.130435

| | | Feature12 <= 8.695652: 0 (12.0)

| | | Feature12 > 8.695652: 1 (2.0)

| | Feature171 > 39.130435: 1 (6.0)

| Feature38 > 10.25641: 0 (48.0)

Number of Leaves : 15

Size of the tree : 29

meka.classifiers.multilabel.BCC: Node #8

J48 pruned tree

------------------

Feature26 <= 46.153846

| Feature128 <= 21.052632

| | Feature148 <= 9.090909: 1 (15.0)

| | Feature148 > 9.090909

| | | Feature82 <= 52.631579: 0 (9.0)

| | | Feature82 > 52.631579

| | | | Feature105 <= 32.352941

| | | | | Feature152 <= 26.315789

| | | | | | Feature171 <= 26.315789: 0 (18.0/1.0)

| | | | | | Feature171 > 26.315789

| | | | | | | Feature9 <= 3.030303: 0 (7.0)

| | | | | | | Feature9 > 3.030303

| | | | | | | | Feature131 <= 15.555556: 1 (13.0)

| | | | | | | | Feature131 > 15.555556

| | | | | | | | | Feature32 <= 4.166667: 1 (4.0)

| | | | | | | | | Feature32 > 4.166667

| | | | | | | | | | Feature94 <= 97.826087: 0 (8.0)

| | | | | | | | | | Feature94 > 97.826087: 1 (2.0)

| | | | | Feature152 > 26.315789: 1 (7.0)

| | | | Feature105 > 32.352941: 1 (10.0)

| Feature128 > 21.052632

| | Feature157 <= 76.470588

| | | Feature140 <= 67.46988

| | | | Feature43 <= 30.30303

| | | | | Feature15 <= 10.810811: 0 (16.0)

| | | | | Feature15 > 10.810811

| | | | | | Feature8 <= 7.692308: 1 (3.0)

| | | | | | Feature8 > 7.692308: 0 (2.0)

| | | | Feature43 > 30.30303: 1 (4.0)

| | | Feature140 > 67.46988: 1 (15.0)

| | Feature157 > 76.470588

| | | Feature148 <= 47.826087

| | | | Feature15 <= 17.910448

| | | | | Feature99 <= 92.105263

| | | | | | Feature130 <= 8.695652

| | | | | | | Feature23 <= 38.709677: 1 (7.0)

| | | | | | | Feature23 > 38.709677: 0 (6.0)

| | | | | | Feature130 > 8.695652

| | | | | | | Feature69 <= 8.450704

| | | | | | | | Feature116 <= 2.739726: 1 (52.0)

| | | | | | | | Feature116 > 2.739726

| | | | | | | | | Feature184 <= 4.6875

| | | | | | | | | | Feature18 <= 4.878049: 0 (4.0)

| | | | | | | | | | Feature18 > 4.878049: 1 (2.0)

| | | | | | | | | Feature184 > 4.6875

| | | | | | | | | | Feature171 <= 36.708861

| | | | | | | | | | | Feature151 <= 9.52381

| | | | | | | | | | | | Feature138 <= 10.909091: 1 (3.0)

| | | | | | | | | | | | Feature138 > 10.909091: 0 (2.0)

| | | | | | | | | | | Feature151 > 9.52381: 1 (67.0)

| | | | | | | | | | Feature171 > 36.708861

| | | | | | | | | | | Feature10 <= 6.756757: 1 (3.0)

| | | | | | | | | | | Feature10 > 6.756757: 0 (3.0)

| | | | | | | Feature69 > 8.450704: 1 (90.0)

| | | | | Feature99 > 92.105263

| | | | | | Feature6 <= 7.54717

| | | | | | | wound-healing-peptides = 0

| | | | | | | | Feature145 <= 77.884615

| | | | | | | | | Feature140 <= 91.304348

| | | | | | | | | | Feature176 <= 54.166667

| | | | | | | | | | | Feature98 <= 82.432432: 1 (256.0/4.0)

| | | | | | | | | | | Feature98 > 82.432432

| | | | | | | | | | | | Feature109 <= 1.282051: 1 (17.0)

| | | | | | | | | | | | Feature109 > 1.282051: 0 (5.0)

| | | | | | | | | | Feature176 > 54.166667

| | | | | | | | | | | Feature75 <= 35.483871

| | | | | | | | | | | | Feature122 <= 20.833333: 1 (31.0/1.0)

| | | | | | | | | | | | Feature122 > 20.833333: 0 (4.0/1.0)

| | | | | | | | | | | Feature75 > 35.483871: 0 (4.0)

| | | | | | | | | Feature140 > 91.304348

| | | | | | | | | | Feature47 <= 13.636364: 0 (5.0)

| | | | | | | | | | Feature47 > 13.636364

| | | | | | | | | | | Feature38 <= 18.181818: 1 (10.0)

| | | | | | | | | | | Feature38 > 18.181818: 0 (2.0)

| | | | | | | | Feature145 > 77.884615

| | | | | | | | | Feature45 <= 27.586207

| | | | | | | | | | Feature18 <= 12.121212: 1 (26.0/1.0)

| | | | | | | | | | Feature18 > 12.121212: 0 (2.0)

| | | | | | | | | Feature45 > 27.586207

| | | | | | | | | | Feature57 <= 96.774194: 1 (2.0)

| | | | | | | | | | Feature57 > 96.774194: 0 (13.0/1.0)

| | | | | | | wound-healing-peptides = 1: 0 (2.0)

| | | | | | Feature6 > 7.54717

| | | | | | | Feature138 <= 35

| | | | | | | | Feature36 <= 74.509804: 1 (26.0)

| | | | | | | | Feature36 > 74.509804

| | | | | | | | | Feature119 <= 65.714286

| | | | | | | | | | Feature154 <= 18.181818: 1 (7.0)

| | | | | | | | | | Feature154 > 18.181818

| | | | | | | | | | | Feature1 <= 11.111111

| | | | | | | | | | | | Feature45 <= 32.432432: 0 (15.0)

| | | | | | | | | | | | Feature45 > 32.432432: 1 (3.0/1.0)

| | | | | | | | | | | Feature1 > 11.111111: 1 (3.0)

| | | | | | | | | Feature119 > 65.714286

| | | | | | | | | | Feature138 <= 25

| | | | | | | | | | | Feature173 <= 11.904762

| | | | | | | | | | | | Feature133 <= 23.809524

| | | | | | | | | | | | | wound-healing-peptides = 0

| | | | | | | | | | | | | | Feature140 <= 40.740741

| | | | | | | | | | | | | | | Feature32 <= 7.843137: 1 (8.0)

| | | | | | | | | | | | | | | Feature32 > 7.843137

| | | | | | | | | | | | | | | | Feature170 <= 12.820513

| | | | | | | | | | | | | | | | | Feature10 <= 31.25: 1 (4.0)

| | | | | | | | | | | | | | | | | Feature10 > 31.25: 0 (2.0)

| | | | | | | | | | | | | | | | Feature170 > 12.820513: 0 (10.0)

| | | | | | | | | | | | | | Feature140 > 40.740741

| | | | | | | | | | | | | | | Feature96 <= 41.666667

| | | | | | | | | | | | | | | | Feature8 <= 12

| | | | | | | | | | | | | | | | | Feature2 <= 17.391304

| | | | | | | | | | | | | | | | | | Feature155 <= 62.222222: 1 (106.0/1.0)

| | | | | | | | | | | | | | | | | | Feature155 > 62.222222

| | | | | | | | | | | | | | | | | | | Feature5 <= 5.042017: 1 (4.0)

| | | | | | | | | | | | | | | | | | | Feature5 > 5.042017: 0 (2.0)

| | | | | | | | | | | | | | | | | Feature2 > 17.391304

| | | | | | | | | | | | | | | | | | Feature99 <= 98.387097: 1 (3.0)

| | | | | | | | | | | | | | | | | | Feature99 > 98.387097: 0 (3.0)

| | | | | | | | | | | | | | | | Feature8 > 12

| | | | | | | | | | | | | | | | | Feature18 <= 15.384615

| | | | | | | | | | | | | | | | | | Feature89 <= 37.037037

| | | | | | | | | | | | | | | | | | | Feature140 <= 80: 1 (30.0/1.0)

| | | | | | | | | | | | | | | | | | | Feature140 > 80

| | | | | | | | | | | | | | | | | | | | Feature22 <= 27.027027: 1 (3.0)

| | | | | | | | | | | | | | | | | | | | Feature22 > 27.027027: 0 (3.0)

| | | | | | | | | | | | | | | | | | Feature89 > 37.037037: 0 (2.0)

| | | | | | | | | | | | | | | | | Feature18 > 15.384615: 0 (3.0)

| | | | | | | | | | | | | | | Feature96 > 41.666667

| | | | | | | | | | | | | | | | Feature46 <= 34.146341: 0 (6.0/1.0)

| | | | | | | | | | | | | | | | Feature46 > 34.146341: 1 (4.0)

| | | | | | | | | | | | | wound-healing-peptides = 1: 1 (16.0)

| | | | | | | | | | | | Feature133 > 23.809524

| | | | | | | | | | | | | wound-healing-peptides = 0

| | | | | | | | | | | | | | Feature177 <= 60.714286: 0 (7.0)

| | | | | | | | | | | | | | Feature177 > 60.714286

| | | | | | | | | | | | | | | Feature161 <= 82.022472

| | | | | | | | | | | | | | | | Feature170 <= 5.555556: 0 (6.0)

| | | | | | | | | | | | | | | | Feature170 > 5.555556

| | | | | | | | | | | | | | | | | Feature136 <= 98.275862

| | | | | | | | | | | | | | | | | | Feature150 <= 16.949153

| | | | | | | | | | | | | | | | | | | Feature185 <= 15.151515: 0 (14.0/1.0)

| | | | | | | | | | | | | | | | | | | Feature185 > 15.151515: 1 (3.0)

| | | | | | | | | | | | | | | | | | Feature150 > 16.949153

| | | | | | | | | | | | | | | | | | | Feature96 <= 32.954545

| | | | | | | | | | | | | | | | | | | | Feature68 <= 16.129032: 1 (18.0)

| | | | | | | | | | | | | | | | | | | | Feature68 > 16.129032

| | | | | | | | | | | | | | | | | | | | | Feature17 <= 8.955224

| | | | | | | | | | | | | | | | | | | | | | Feature107 <= 9.090909

| | | | | | | | | | | | | | | | | | | | | | | Feature66 <= 17.142857: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | | | Feature66 > 17.142857

| | | | | | | | | | | | | | | | | | | | | | | | Feature10 <= 16.883117: 1 (27.0)

| | | | | | | | | | | | | | | | | | | | | | | | Feature10 > 16.883117: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | | Feature107 > 9.090909: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | Feature17 > 8.955224: 0 (3.0)

| | | | | | | | | | | | | | | | | | | Feature96 > 32.954545: 0 (3.0)

| | | | | | | | | | | | | | | | | Feature136 > 98.275862: 1 (21.0)

| | | | | | | | | | | | | | | Feature161 > 82.022472: 0 (7.0)

| | | | | | | | | | | | | wound-healing-peptides = 1: 0 (3.0)

| | | | | | | | | | | Feature173 > 11.904762

| | | | | | | | | | | | Feature123 <= 61.403509

| | | | | | | | | | | | | Feature45 <= 16

| | | | | | | | | | | | | | Feature4 <= 7.692308

| | | | | | | | | | | | | | | Feature93 <= 78.571429: 1 (22.0/1.0)

| | | | | | | | | | | | | | | Feature93 > 78.571429: 0 (2.0)

| | | | | | | | | | | | | | Feature4 > 7.692308: 0 (2.0)

| | | | | | | | | | | | | Feature45 > 16: 1 (100.0)

| | | | | | | | | | | | Feature123 > 61.403509

| | | | | | | | | | | | | Feature94 <= 99.425287: 0 (4.0)

| | | | | | | | | | | | | Feature94 > 99.425287: 1 (3.0)

| | | | | | | | | | Feature138 > 25

| | | | | | | | | | | Feature113 <= 25.316456: 0 (8.0)

| | | | | | | | | | | Feature113 > 25.316456

| | | | | | | | | | | | Feature162 <= 76.923077: 0 (5.0)

| | | | | | | | | | | | Feature162 > 76.923077

| | | | | | | | | | | | | Feature112 <= 38.888889

| | | | | | | | | | | | | | Feature185 <= 20.512821

| | | | | | | | | | | | | | | Feature92 <= 42.708333

| | | | | | | | | | | | | | | | Feature126 <= 32.876712: 1 (12.0)

| | | | | | | | | | | | | | | | Feature126 > 32.876712

| | | | | | | | | | | | | | | | | Feature59 <= 19.444444: 0 (6.0)

| | | | | | | | | | | | | | | | | Feature59 > 19.444444

| | | | | | | | | | | | | | | | | | Feature68 <= 24.242424: 1 (8.0)

| | | | | | | | | | | | | | | | | | Feature68 > 24.242424: 0 (2.0)

| | | | | | | | | | | | | | | Feature92 > 42.708333: 1 (38.0/1.0)

| | | | | | | | | | | | | | Feature185 > 20.512821

| | | | | | | | | | | | | | | Feature45 <= 22: 1 (6.0)

| | | | | | | | | | | | | | | Feature45 > 22

| | | | | | | | | | | | | | | | Feature97 <= 51.724138: 0 (13.0)

| | | | | | | | | | | | | | | | Feature97 > 51.724138: 1 (3.0)

| | | | | | | | | | | | | Feature112 > 38.888889: 0 (5.0)

| | | | | | | Feature138 > 35: 1 (58.0/1.0)

| | | | Feature15 > 17.910448: 1 (96.0/1.0)

| | | Feature148 > 47.826087

| | | | wound-healing-peptides = 0

| | | | | Feature109 <= 1.639344

| | | | | | Feature185 <= 22.535211

| | | | | | | Feature10 <= 4.651163

| | | | | | | | Feature134 <= 55.737705

| | | | | | | | | Feature129 <= 29.787234

| | | | | | | | | | Feature19 <= 33.333333

| | | | | | | | | | | Feature7 <= 12.121212: 1 (33.0/3.0)

| | | | | | | | | | | Feature7 > 12.121212: 0 (3.0/1.0)

| | | | | | | | | | Feature19 > 33.333333: 0 (2.0)

| | | | | | | | | Feature129 > 29.787234: 0 (3.0)

| | | | | | | | Feature134 > 55.737705: 0 (4.0)

| | | | | | | Feature10 > 4.651163: 1 (24.0)

| | | | | | Feature185 > 22.535211

| | | | | | | Feature151 <= 15.942029: 0 (9.0)

| | | | | | | Feature151 > 15.942029: 1 (3.0)

| | | | | Feature109 > 1.639344: 0 (8.0)

| | | | wound-healing-peptides = 1: 1 (8.0)

Feature26 > 46.153846

| Feature109 <= 1.724138

| | Feature3 <= 3.061224

| | | Feature14 <= 3.252033

| | | | Feature52 <= 85.294118: 1 (18.0)

| | | | Feature52 > 85.294118

| | | | | wound-healing-peptides = 0

| | | | | | Feature78 <= 90

| | | | | | | Feature84 <= 24.489796

| | | | | | | | Feature130 <= 37.5: 1 (10.0)

| | | | | | | | Feature130 > 37.5: 0 (2.0)

| | | | | | | Feature84 > 24.489796

| | | | | | | | Feature40 <= 69.565217: 0 (24.0)

| | | | | | | | Feature40 > 69.565217: 1 (5.0/1.0)

| | | | | | Feature78 > 90

| | | | | | | Feature149 <= 39.473684: 1 (23.0)

| | | | | | | Feature149 > 39.473684: 0 (3.0/1.0)

| | | | | wound-healing-peptides = 1: 0 (3.0)

| | | Feature14 > 3.252033: 0 (5.0)

| | Feature3 > 3.061224: 0 (5.0)

| Feature109 > 1.724138: 0 (7.0)

Number of Leaves : 116

Size of the tree : 231

meka.classifiers.multilabel.BCC: Node #9

J48 pruned tree

------------------

Feature95 <= 46.428571

| Feature172 <= 47.826087

| | Feature159 <= 38.636364

| | | Feature131 <= 41.176471

| | | | Feature120 <= 94.117647

| | | | | Feature132 <= 2.272727

| | | | | | Feature5 <= 1.075269: 1 (4.0)

| | | | | | Feature5 > 1.075269: 0 (3.0)

| | | | | Feature132 > 2.272727

| | | | | | Feature111 <= 96.551724: 0 (106.0/1.0)

| | | | | | Feature111 > 96.551724

| | | | | | | Feature154 <= 17.857143: 0 (5.0)

| | | | | | | Feature154 > 17.857143: 1 (4.0)

| | | | Feature120 > 94.117647

| | | | | Feature172 <= 2.777778

| | | | | | Feature185 <= 12.121212

| | | | | | | Feature4 <= 8.510638: 0 (34.0)

| | | | | | | Feature4 > 8.510638: 1 (3.0)

| | | | | | Feature185 > 12.121212: 1 (2.0)

| | | | | Feature172 > 2.777778

| | | | | | antibacterial-peptides = 0

| | | | | | | Feature173 <= 3.030303

| | | | | | | | Feature116 <= 2.380952: 1 (3.0)

| | | | | | | | Feature116 > 2.380952

| | | | | | | | | Feature156 <= 50: 1 (3.0)

| | | | | | | | | Feature156 > 50: 0 (34.0)

| | | | | | | Feature173 > 3.030303: 0 (239.0/1.0)

| | | | | | antibacterial-peptides = 1: 0 (1143.0/2.0)

| | | Feature131 > 41.176471

| | | | Feature154 <= 34

| | | | | Feature5 <= 18.518519: 0 (32.0)

| | | | | Feature5 > 18.518519: 1 (2.0)

| | | | Feature154 > 34: 1 (4.0)

| | Feature159 > 38.636364

| | | Feature129 <= 7.407407

| | | | Feature136 <= 88.888889: 0 (4.0)

| | | | Feature136 > 88.888889: 1 (9.0)

| | | Feature129 > 7.407407: 0 (30.0)

| Feature172 > 47.826087

| | Feature52 <= 84.375: 1 (7.0)

| | Feature52 > 84.375

| | | Feature7 <= 5.555556: 0 (27.0)

| | | Feature7 > 5.555556

| | | | Feature1 <= 2.941176: 0 (2.0)

| | | | Feature1 > 2.941176: 1 (2.0)

Feature95 > 46.428571

| Feature163 <= 4.255319: 1 (13.0/1.0)

| Feature163 > 4.255319: 0 (12.0)

Number of Leaves : 25

Size of the tree : 49

meka.classifiers.multilabel.BCC: Node #10

J48 pruned tree

------------------

Feature163 <= 64.705882

| Feature55 <= 70.833333

| | Feature132 <= 1.754386

| | | Feature2 <= 7.594937: 0 (87.0)

| | | Feature2 > 7.594937

| | | | Feature178 <= 97.87234

| | | | | Feature61 <= 75.675676: 1 (14.0)

| | | | | Feature61 > 75.675676: 0 (3.0)

| | | | Feature178 > 97.87234

| | | | | Feature109 <= 5.405405: 0 (22.0)

| | | | | Feature109 > 5.405405: 1 (2.0)

| | Feature132 > 1.754386

| | | antibacterial-peptides = 0

| | | | Feature36 <= 97.87234: 0 (233.0/2.0)

| | | | Feature36 > 97.87234

| | | | | Feature40 <= 80.898876

| | | | | | Feature30 <= 76.923077: 0 (54.0)

| | | | | | Feature30 > 76.923077

| | | | | | | Feature15 <= 3.614458: 0 (7.0)

| | | | | | | Feature15 > 3.614458: 1 (7.0/1.0)

| | | | | Feature40 > 80.898876: 1 (5.0/1.0)

| | | antibacterial-peptides = 1

| | | | Feature122 <= 38

| | | | | Feature1 <= 19.230769: 0 (1123.0)

| | | | | Feature1 > 19.230769

| | | | | | Feature151 <= 32.5: 0 (61.0)

| | | | | | Feature151 > 32.5

| | | | | | | Feature33 <= 28.070175: 0 (9.0)

| | | | | | | Feature33 > 28.070175: 1 (5.0)

| | | | Feature122 > 38

| | | | | Feature17 <= 6: 0 (22.0)

| | | | | Feature17 > 6: 1 (3.0)

| Feature55 > 70.833333

| | Feature153 <= 16.27907: 0 (28.0)

| | Feature153 > 16.27907

| | | Feature10 <= 7.407407: 1 (13.0)

| | | Feature10 > 7.407407: 0 (3.0)

Feature163 > 64.705882

| Feature50 <= 54.43038: 0 (11.0)

| Feature50 > 54.43038

| | Feature13 <= 2.083333: 1 (13.0)

| | Feature13 > 2.083333: 0 (2.0)

Number of Leaves : 22

Size of the tree : 43

meka.classifiers.multilabel.BCC: Node #11

J48 pruned tree

------------------

Feature55 <= 70.833333

| Feature163 <= 64.705882

| | Feature58 <= 0.787402

| | | Feature6 <= 6.521739

| | | | Feature89 <= 25.233645: 1 (13.0)

| | | | Feature89 > 25.233645: 0 (2.0)

| | | Feature6 > 6.521739: 0 (15.0)

| | Feature58 > 0.787402

| | | Feature151 <= 8.823529: 0 (140.0)

| | | Feature151 > 8.823529

| | | | antibacterial-peptides = 0

| | | | | Feature11 <= 4.878049

| | | | | | Feature13 <= 2.479339

| | | | | | | Feature154 <= 37.179487

| | | | | | | | Feature111 <= 44: 0 (88.0)

| | | | | | | | Feature111 > 44

| | | | | | | | | Feature27 <= 13.043478: 1 (2.0)

| | | | | | | | | Feature27 > 13.043478: 0 (11.0)

| | | | | | | Feature154 > 37.179487

| | | | | | | | Feature83 <= 98: 1 (3.0)

| | | | | | | | Feature83 > 98: 0 (4.0)

| | | | | | Feature13 > 2.479339

| | | | | | | Feature19 <= 3.448276

| | | | | | | | Feature67 <= 30.487805

| | | | | | | | | Feature156 <= 58.823529

| | | | | | | | | | Feature117 <= 24.657534

| | | | | | | | | | | Feature135 <= 62.745098

| | | | | | | | | | | | Feature88 <= 7.692308: 0 (3.0/1.0)

| | | | | | | | | | | | Feature88 > 7.692308: 1 (11.0)

| | | | | | | | | | | Feature135 > 62.745098: 0 (4.0)

| | | | | | | | | | Feature117 > 24.657534: 0 (17.0)

| | | | | | | | | Feature156 > 58.823529

| | | | | | | | | | Feature178 <= 90.196078

| | | | | | | | | | | Feature47 <= 19.84127

| | | | | | | | | | | | Feature56 <= 58.333333: 0 (3.0)

| | | | | | | | | | | | Feature56 > 58.333333: 1 (4.0)

| | | | | | | | | | | Feature47 > 19.84127: 0 (12.0)

| | | | | | | | | | Feature178 > 90.196078: 0 (80.0)

| | | | | | | | Feature67 > 30.487805

| | | | | | | | | Feature157 <= 96.774194: 0 (5.0)

| | | | | | | | | Feature157 > 96.774194

| | | | | | | | | | Feature17 <= 1.351351: 0 (4.0/1.0)

| | | | | | | | | | Feature17 > 1.351351: 1 (9.0)

| | | | | | | Feature19 > 3.448276

| | | | | | | | Feature10 <= 4.444444: 0 (4.0)

| | | | | | | | Feature10 > 4.444444: 1 (9.0)

| | | | | Feature11 > 4.878049

| | | | | | Feature144 <= 39.393939

| | | | | | | Feature50 <= 57.142857: 0 (14.0)

| | | | | | | Feature50 > 57.142857: 1 (4.0)

| | | | | | Feature144 > 39.393939: 1 (8.0)

| | | | antibacterial-peptides = 1

| | | | | Feature121 <= 79.069767

| | | | | | Feature46 <= 4

| | | | | | | Feature146 <= 91.176471: 1 (8.0)

| | | | | | | Feature146 > 91.176471: 0 (17.0)

| | | | | | Feature46 > 4

| | | | | | | Feature5 <= 0.900901: 0 (285.0)

| | | | | | | Feature5 > 0.900901

| | | | | | | | Feature147 <= 30.952381: 0 (137.0)

| | | | | | | | Feature147 > 30.952381

| | | | | | | | | Feature5 <= 1.754386

| | | | | | | | | | Feature34 <= 42.857143

| | | | | | | | | | | Feature10 <= 7.843137: 1 (11.0)

| | | | | | | | | | | Feature10 > 7.843137: 0 (4.0)

| | | | | | | | | | Feature34 > 42.857143: 0 (20.0)

| | | | | | | | | Feature5 > 1.754386

| | | | | | | | | | Feature138 <= 17.391304

| | | | | | | | | | | Feature75 <= 12.195122: 0 (95.0/1.0)

| | | | | | | | | | | Feature75 > 12.195122

| | | | | | | | | | | | Feature49 <= 14.814815

| | | | | | | | | | | | | Feature94 <= 90.625: 1 (16.0/1.0)

| | | | | | | | | | | | | Feature94 > 90.625: 0 (8.0)

| | | | | | | | | | | | Feature49 > 14.814815

| | | | | | | | | | | | | Feature69 <= 2.564103

| | | | | | | | | | | | | | Feature108 <= 25: 0 (6.0)

| | | | | | | | | | | | | | Feature108 > 25: 1 (10.0)

| | | | | | | | | | | | | Feature69 > 2.564103

| | | | | | | | | | | | | | Feature88 <= 27.906977

| | | | | | | | | | | | | | | Feature43 <= 47.619048

| | | | | | | | | | | | | | | | Feature105 <= 32

| | | | | | | | | | | | | | | | | Feature188 <= 59.375

| | | | | | | | | | | | | | | | | | Feature22 <= 35.416667: 0 (5.0)

| | | | | | | | | | | | | | | | | | Feature22 > 35.416667: 1 (2.0)

| | | | | | | | | | | | | | | | | Feature188 > 59.375: 0 (126.0)

| | | | | | | | | | | | | | | | Feature105 > 32

| | | | | | | | | | | | | | | | | Feature13 <= 3.571429: 0 (4.0)

| | | | | | | | | | | | | | | | | Feature13 > 3.571429: 1 (4.0)

| | | | | | | | | | | | | | | Feature43 > 47.619048

| | | | | | | | | | | | | | | | Feature16 <= 3.225806: 0 (6.0)

| | | | | | | | | | | | | | | | Feature16 > 3.225806: 1 (6.0)

| | | | | | | | | | | | | | Feature88 > 27.906977

| | | | | | | | | | | | | | | Feature136 <= 97.826087: 1 (6.0)

| | | | | | | | | | | | | | | Feature136 > 97.826087: 0 (4.0)

| | | | | | | | | | Feature138 > 17.391304

| | | | | | | | | | | Feature184 <= 1.754386

| | | | | | | | | | | | Feature148 <= 37.5: 0 (20.0)

| | | | | | | | | | | | Feature148 > 37.5: 1 (6.0/1.0)

| | | | | | | | | | | Feature184 > 1.754386

| | | | | | | | | | | | Feature18 <= 12.5: 0 (297.0)

| | | | | | | | | | | | Feature18 > 12.5

| | | | | | | | | | | | | Feature14 <= 4.672897: 0 (18.0/1.0)

| | | | | | | | | | | | | Feature14 > 4.672897: 1 (2.0)

| | | | | Feature121 > 79.069767

| | | | | | Feature147 <= 60

| | | | | | | Feature43 <= 43.75: 0 (48.0)

| | | | | | | Feature43 > 43.75: 1 (6.0)

| | | | | | Feature147 > 60: 1 (11.0)

| Feature163 > 64.705882

| | Feature50 <= 54.43038: 0 (11.0)

| | Feature50 > 54.43038

| | | Feature13 <= 2.083333: 1 (13.0)

| | | Feature13 > 2.083333: 0 (2.0)

Feature55 > 70.833333

| Feature174 <= 4.651163

| | Feature19 <= 3.773585: 1 (25.0)

| | Feature19 > 3.773585: 0 (2.0)

| Feature174 > 4.651163: 0 (17.0)

Number of Leaves : 60

Size of the tree : 119

meka.classifiers.multilabel.BCC: Node #12

J48 pruned tree

------------------

Feature2 <= 18.181818

| Feature97 <= 73.529412

| | Feature18 <= 22.727273

| | | Feature133 <= 45

| | | | Feature153 <= 1.282051

| | | | | Feature151 <= 17.307692: 1 (8.0)

| | | | | Feature151 > 17.307692

| | | | | | Feature124 <= 77.777778

| | | | | | | Feature161 <= 58.163265: 1 (2.0)

| | | | | | | Feature161 > 58.163265: 0 (35.0/1.0)

| | | | | | Feature124 > 77.777778

| | | | | | | Feature10 <= 3.278689: 0 (2.0)

| | | | | | | Feature10 > 3.278689: 1 (9.0)

| | | | Feature153 > 1.282051

| | | | | Feature130 <= 42.857143

| | | | | | Feature158 <= 4.411765

| | | | | | | Feature149 <= 12.5

| | | | | | | | Feature62 <= 98.076923: 0 (15.0/1.0)

| | | | | | | | Feature62 > 98.076923: 1 (5.0)

| | | | | | | Feature149 > 12.5: 0 (288.0/2.0)

| | | | | | Feature158 > 4.411765

| | | | | | | Feature7 <= 12.121212

| | | | | | | | Feature37 <= 17.977528

| | | | | | | | | Feature70 <= 29.032258

| | | | | | | | | | Feature146 <= 77.777778

| | | | | | | | | | | Feature123 <= 50

| | | | | | | | | | | | Feature108 <= 16.129032: 1 (8.0)

| | | | | | | | | | | | Feature108 > 16.129032

| | | | | | | | | | | | | Feature112 <= 53.846154: 0 (35.0)

| | | | | | | | | | | | | Feature112 > 53.846154: 1 (3.0)

| | | | | | | | | | | Feature123 > 50: 1 (8.0)

| | | | | | | | | | Feature146 > 77.777778

| | | | | | | | | | | Feature99 <= 76.923077

| | | | | | | | | | | | Feature33 <= 18.84058

| | | | | | | | | | | | | Feature14 <= 4.166667

| | | | | | | | | | | | | | Feature188 <= 57.692308: 0 (4.0)

| | | | | | | | | | | | | | Feature188 > 57.692308: 1 (14.0/1.0)

| | | | | | | | | | | | | Feature14 > 4.166667: 0 (2.0)

| | | | | | | | | | | | Feature33 > 18.84058: 0 (13.0)

| | | | | | | | | | | Feature99 > 76.923077

| | | | | | | | | | | | Feature154 <= 40.540541

| | | | | | | | | | | | | Feature7 <= 3.636364

| | | | | | | | | | | | | | Feature149 <= 18.75: 0 (106.0)

| | | | | | | | | | | | | | Feature149 > 18.75

| | | | | | | | | | | | | | | antibacterial-peptides = 0

| | | | | | | | | | | | | | | | Feature42 <= 61.538462

| | | | | | | | | | | | | | | | | Feature105 <= 20.689655

| | | | | | | | | | | | | | | | | | Feature29 <= 74.358974

| | | | | | | | | | | | | | | | | | | Feature44 <= 26.845638: 0 (56.0)

| | | | | | | | | | | | | | | | | | | Feature44 > 26.845638

| | | | | | | | | | | | | | | | | | | | Feature75 <= 12.903226

| | | | | | | | | | | | | | | | | | | | | Feature12 <= 1.333333: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | Feature12 > 1.333333: 1 (4.0)

| | | | | | | | | | | | | | | | | | | | Feature75 > 12.903226: 0 (9.0)

| | | | | | | | | | | | | | | | | | Feature29 > 74.358974: 1 (5.0/1.0)

| | | | | | | | | | | | | | | | | Feature105 > 20.689655

| | | | | | | | | | | | | | | | | | Feature96 <= 27.027027: 0 (3.0/1.0)

| | | | | | | | | | | | | | | | | | Feature96 > 27.027027: 1 (6.0)

| | | | | | | | | | | | | | | | Feature42 > 61.538462: 1 (8.0/1.0)

| | | | | | | | | | | | | | | antibacterial-peptides = 1

| | | | | | | | | | | | | | | | Feature127 <= 12.5

| | | | | | | | | | | | | | | | | Feature93 <= 69.230769: 0 (13.0)

| | | | | | | | | | | | | | | | | Feature93 > 69.230769

| | | | | | | | | | | | | | | | | | Feature16 <= 2.5: 0 (2.0)

| | | | | | | | | | | | | | | | | | Feature16 > 2.5: 1 (10.0)

| | | | | | | | | | | | | | | | Feature127 > 12.5

| | | | | | | | | | | | | | | | | Feature2 <= 13.953488

| | | | | | | | | | | | | | | | | | Feature5 <= 15

| | | | | | | | | | | | | | | | | | | Feature70 <= 8.823529

| | | | | | | | | | | | | | | | | | | | Feature158 <= 10.810811: 0 (30.0)

| | | | | | | | | | | | | | | | | | | | Feature158 > 10.810811

| | | | | | | | | | | | | | | | | | | | | Feature17 <= 2.173913: 1 (6.0)

| | | | | | | | | | | | | | | | | | | | | Feature17 > 2.173913: 0 (2.0)

| | | | | | | | | | | | | | | | | | | Feature70 > 8.823529: 0 (268.0)

| | | | | | | | | | | | | | | | | | Feature5 > 15

| | | | | | | | | | | | | | | | | | | Feature150 <= 30.952381: 0 (9.0)

| | | | | | | | | | | | | | | | | | | Feature150 > 30.952381

| | | | | | | | | | | | | | | | | | | | Feature97 <= 34.210526: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | Feature97 > 34.210526: 1 (7.0)

| | | | | | | | | | | | | | | | | Feature2 > 13.953488

| | | | | | | | | | | | | | | | | | Feature13 <= 8.045977

| | | | | | | | | | | | | | | | | | | Feature120 <= 95.454545: 1 (3.0/1.0)

| | | | | | | | | | | | | | | | | | | Feature120 > 95.454545: 0 (28.0)

| | | | | | | | | | | | | | | | | | Feature13 > 8.045977

| | | | | | | | | | | | | | | | | | | Feature7 <= 1.190476: 0 (4.0)

| | | | | | | | | | | | | | | | | | | Feature7 > 1.190476: 1 (12.0)

| | | | | | | | | | | | | Feature7 > 3.636364: 0 (136.0)

| | | | | | | | | | | | Feature154 > 40.540541

| | | | | | | | | | | | | Feature41 <= 83.333333: 1 (8.0)

| | | | | | | | | | | | | Feature41 > 83.333333

| | | | | | | | | | | | | | Feature34 <= 23.333333: 1 (2.0)

| | | | | | | | | | | | | | Feature34 > 23.333333: 0 (15.0)

| | | | | | | | | Feature70 > 29.032258

| | | | | | | | | | Feature148 <= 35.555556

| | | | | | | | | | | Feature118 <= 45.283019: 0 (9.0)

| | | | | | | | | | | Feature118 > 45.283019

| | | | | | | | | | | | Feature22 <= 41.37931

| | | | | | | | | | | | | Feature122 <= 27.956989

| | | | | | | | | | | | | | Feature17 <= 5: 1 (25.0/1.0)

| | | | | | | | | | | | | | Feature17 > 5: 0 (2.0)

| | | | | | | | | | | | | Feature122 > 27.956989: 0 (2.0)

| | | | | | | | | | | | Feature22 > 41.37931: 0 (6.0)

| | | | | | | | | | Feature148 > 35.555556: 0 (14.0)

| | | | | | | | Feature37 > 17.977528: 0 (119.0)

| | | | | | | Feature7 > 12.121212

| | | | | | | | Feature11 <= 4.651163

| | | | | | | | | Feature185 <= 13.793103

| | | | | | | | | | Feature9 <= 6.818182: 1 (6.0)

| | | | | | | | | | Feature9 > 6.818182: 0 (2.0)

| | | | | | | | | Feature185 > 13.793103: 0 (12.0)

| | | | | | | | Feature11 > 4.651163: 1 (5.0)

| | | | | Feature130 > 42.857143: 0 (105.0)

| | | Feature133 > 45

| | | | Feature147 <= 62.068966: 0 (15.0)

| | | | Feature147 > 62.068966: 1 (14.0/1.0)

| | Feature18 > 22.727273

| | | Feature15 <= 2.941176

| | | | antibacterial-peptides = 0: 0 (4.0)

| | | | antibacterial-peptides = 1: 1 (14.0/1.0)

| | | Feature15 > 2.941176: 0 (9.0)

| Feature97 > 73.529412

| | Feature23 <= 34.042553: 0 (14.0)

| | Feature23 > 34.042553: 1 (17.0/1.0)

Feature2 > 18.181818

| Feature186 <= 53.846154

| | Feature129 <= 32.653061

| | | Feature1 <= 11.764706

| | | | Feature52 <= 90: 0 (11.0)

| | | | Feature52 > 90

| | | | | Feature139 <= 52.272727

| | | | | | Feature132 <= 17.647059

| | | | | | | Feature134 <= 36.666667: 1 (16.0)

| | | | | | | Feature134 > 36.666667

| | | | | | | | Feature55 <= 45.833333

| | | | | | | | | Feature15 <= 3.225806

| | | | | | | | | | Feature17 <= 1.123596

| | | | | | | | | | | Feature18 <= 9.52381: 1 (2.0)

| | | | | | | | | | | Feature18 > 9.52381: 0 (2.0)

| | | | | | | | | | Feature17 > 1.123596: 1 (10.0)

| | | | | | | | | Feature15 > 3.225806: 0 (14.0)

| | | | | | | | Feature55 > 45.833333: 0 (9.0)

| | | | | | Feature132 > 17.647059: 0 (5.0)

| | | | | Feature139 > 52.272727: 0 (10.0)

| | | Feature1 > 11.764706: 1 (7.0)

| | Feature129 > 32.653061: 1 (16.0)

| Feature186 > 53.846154: 0 (24.0)

Number of Leaves : 74

Size of the tree : 147

meka.classifiers.multilabel.BCC: Node #13

J48 pruned tree

------------------

Feature97 <= 73.333333

| Feature142 <= 2.173913: 0 (125.0)

| Feature142 > 2.173913

| | Feature8 <= 18.604651

| | | Feature74 <= 31.818182

| | | | Feature24 <= 4

| | | | | Feature57 <= 97.826087

| | | | | | Feature68 <= 3.846154

| | | | | | | Feature76 <= 49.285714: 0 (61.0)

| | | | | | | Feature76 > 49.285714

| | | | | | | | Feature36 <= 90.47619: 1 (5.0)

| | | | | | | | Feature36 > 90.47619: 0 (6.0)

| | | | | | Feature68 > 3.846154: 1 (5.0/1.0)

| | | | | Feature57 > 97.826087

| | | | | | Feature162 <= 98.076923

| | | | | | | Feature63 <= 59.090909: 1 (21.0)

| | | | | | | Feature63 > 59.090909: 0 (2.0)

| | | | | | Feature162 > 98.076923: 0 (4.0)

| | | | Feature24 > 4

| | | | | Feature74 <= 1.282051

| | | | | | Feature170 <= 26.190476

| | | | | | | Feature72 <= 74.666667: 1 (13.0)

| | | | | | | Feature72 > 74.666667: 0 (4.0)

| | | | | | Feature170 > 26.190476: 0 (16.0)

| | | | | Feature74 > 1.282051

| | | | | | Feature52 <= 74.285714

| | | | | | | Feature11 <= 8

| | | | | | | | Feature93 <= 48.484848: 0 (34.0)

| | | | | | | | Feature93 > 48.484848

| | | | | | | | | Feature27 <= 16.666667: 0 (3.0)

| | | | | | | | | Feature27 > 16.666667: 1 (10.0)

| | | | | | | Feature11 > 8: 1 (5.0)

| | | | | | Feature52 > 74.285714

| | | | | | | Feature77 <= 48.484848: 0 (148.0)

| | | | | | | Feature77 > 48.484848

| | | | | | | | Feature161 <= 76.923077

| | | | | | | | | Feature96 <= 30

| | | | | | | | | | Feature132 <= 29.411765

| | | | | | | | | | | Feature157 <= 83.870968

| | | | | | | | | | | | Feature22 <= 40.206186

| | | | | | | | | | | | | Feature12 <= 1.785714: 0 (3.0)

| | | | | | | | | | | | | Feature12 > 1.785714: 1 (13.0/1.0)

| | | | | | | | | | | | Feature22 > 40.206186: 0 (12.0)

| | | | | | | | | | | Feature157 > 83.870968

| | | | | | | | | | | | Feature3 <= 5.681818

| | | | | | | | | | | | | Feature99 <= 96.428571

| | | | | | | | | | | | | | Feature124 <= 55.555556

| | | | | | | | | | | | | | | Feature87 <= 32.786885: 0 (191.0)

| | | | | | | | | | | | | | | Feature87 > 32.786885

| | | | | | | | | | | | | | | | Feature25 <= 0.757576: 1 (3.0)

| | | | | | | | | | | | | | | | Feature25 > 0.757576

| | | | | | | | | | | | | | | | | Feature126 <= 24.444444

| | | | | | | | | | | | | | | | | | Feature165 <= 39.285714: 0 (4.0)

| | | | | | | | | | | | | | | | | | Feature165 > 39.285714: 1 (5.0)

| | | | | | | | | | | | | | | | | Feature126 > 24.444444: 0 (46.0/1.0)

| | | | | | | | | | | | | | Feature124 > 55.555556

| | | | | | | | | | | | | | | Feature22 <= 33.766234: 1 (9.0)

| | | | | | | | | | | | | | | Feature22 > 33.766234: 0 (11.0)

| | | | | | | | | | | | | Feature99 > 96.428571

| | | | | | | | | | | | | | Feature184 <= 4.109589: 0 (47.0)

| | | | | | | | | | | | | | Feature184 > 4.109589

| | | | | | | | | | | | | | | Feature151 <= 12.903226: 0 (31.0)

| | | | | | | | | | | | | | | Feature151 > 12.903226

| | | | | | | | | | | | | | | | Feature187 <= 81.818182

| | | | | | | | | | | | | | | | | Feature177 <= 74.285714

| | | | | | | | | | | | | | | | | | Feature15 <= 3.773585

| | | | | | | | | | | | | | | | | | | Feature57 <= 81.632653

| | | | | | | | | | | | | | | | | | | | Feature2 <= 9.756098: 0 (3.0)

| | | | | | | | | | | | | | | | | | | | Feature2 > 9.756098: 1 (6.0)

| | | | | | | | | | | | | | | | | | | Feature57 > 81.632653

| | | | | | | | | | | | | | | | | | | | Feature50 <= 58.333333

| | | | | | | | | | | | | | | | | | | | | Feature26 <= 53.846154

| | | | | | | | | | | | | | | | | | | | | | Feature25 <= 22.857143: 0 (93.0/3.0)

| | | | | | | | | | | | | | | | | | | | | | Feature25 > 22.857143

| | | | | | | | | | | | | | | | | | | | | | | Feature17 <= 2.040816: 1 (5.0)

| | | | | | | | | | | | | | | | | | | | | | | Feature17 > 2.040816: 0 (9.0/1.0)

| | | | | | | | | | | | | | | | | | | | | Feature26 > 53.846154

| | | | | | | | | | | | | | | | | | | | | | Feature6 <= 11.111111: 1 (7.0/1.0)

| | | | | | | | | | | | | | | | | | | | | | Feature6 > 11.111111: 0 (3.0)

| | | | | | | | | | | | | | | | | | | | Feature50 > 58.333333

| | | | | | | | | | | | | | | | | | | | | Feature36 <= 91.304348: 0 (2.0)

| | | | | | | | | | | | | | | | | | | | | Feature36 > 91.304348: 1 (6.0)

| | | | | | | | | | | | | | | | | | Feature15 > 3.773585: 0 (49.0)

| | | | | | | | | | | | | | | | | Feature177 > 74.285714

| | | | | | | | | | | | | | | | | | Feature81 <= 46.153846

| | | | | | | | | | | | | | | | | | | Feature2 <= 2.173913

| | | | | | | | | | | | | | | | | | | | Feature22 <= 54.385965: 1 (10.0)

| | | | | | | | | | | | | | | | | | | | Feature22 > 54.385965: 0 (3.0)

| | | | | | | | | | | | | | | | | | | Feature2 > 2.173913: 0 (20.0)

| | | | | | | | | | | | | | | | | | Feature81 > 46.153846: 1 (13.0)

| | | | | | | | | | | | | | | | Feature187 > 81.818182

| | | | | | | | | | | | | | | | | Feature41 <= 88.349515: 1 (18.0/1.0)

| | | | | | | | | | | | | | | | | Feature41 > 88.349515: 0 (13.0/1.0)

| | | | | | | | | | | | Feature3 > 5.681818: 0 (57.0)

| | | | | | | | | | Feature132 > 29.411765: 0 (73.0)

| | | | | | | | | Feature96 > 30: 0 (91.0)

| | | | | | | | Feature161 > 76.923077

| | | | | | | | | Feature35 <= 54.166667

| | | | | | | | | | Feature9 <= 15.625: 0 (13.0)

| | | | | | | | | | Feature9 > 15.625: 1 (5.0/1.0)

| | | | | | | | | Feature35 > 54.166667: 0 (203.0)

| | | Feature74 > 31.818182

| | | | Feature160 <= 7.407407: 1 (5.0)

| | | | Feature160 > 7.407407

| | | | | Feature142 <= 26.923077

| | | | | | Feature7 <= 16.666667

| | | | | | | Feature118 <= 41.37931: 1 (5.0/1.0)

| | | | | | | Feature118 > 41.37931

| | | | | | | | Feature49 <= 48.571429

| | | | | | | | | Feature126 <= 11.111111: 1 (4.0/1.0)

| | | | | | | | | Feature126 > 11.111111: 0 (50.0/1.0)

| | | | | | | | Feature49 > 48.571429

| | | | | | | | | Feature62 <= 94.594595: 0 (5.0)

| | | | | | | | | Feature62 > 94.594595: 1 (6.0)

| | | | | | Feature7 > 16.666667: 1 (5.0/1.0)

| | | | | Feature142 > 26.923077: 1 (4.0)

| | Feature8 > 18.604651

| | | Feature185 <= 17.582418

| | | | Feature31 <= 50: 1 (6.0)

| | | | Feature31 > 50

| | | | | Feature40 <= 41.666667: 1 (5.0)

| | | | | Feature40 > 41.666667

| | | | | | Feature160 <= 10.344828: 1 (4.0)

| | | | | | Feature160 > 10.344828

| | | | | | | Feature4 <= 6.17284: 0 (45.0/1.0)

| | | | | | | Feature4 > 6.17284: 1 (3.0/1.0)

| | | Feature185 > 17.582418: 1 (7.0)

Feature97 > 73.333333

| Feature7 <= 3.225806: 0 (17.0/1.0)

| Feature7 > 3.225806: 1 (17.0/1.0)

Number of Leaves : 66

Size of the tree : 131

meka.classifiers.multilabel.BCC: Node #14

J48 pruned tree

------------------

Feature152 <= 39.393939

| Feature18 <= 22.222222

| | Feature2 <= 19.047619

| | | Feature133 <= 45

| | | | Feature154 <= 40.625

| | | | | Feature146 <= 77.777778

| | | | | | Feature113 <= 69.767442

| | | | | | | Feature12 <= 9.52381

| | | | | | | | Feature160 <= 9.090909: 1 (4.0/1.0)

| | | | | | | | Feature160 > 9.090909: 0 (70.0)

| | | | | | | Feature12 > 9.52381: 1 (5.0)

| | | | | | Feature113 > 69.767442

| | | | | | | Feature5 <= 3.658537: 1 (12.0)

| | | | | | | Feature5 > 3.658537: 0 (2.0)

| | | | | Feature146 > 77.777778

| | | | | | Feature46 <= 28.125

| | | | | | | Feature5 <= 10.526316

| | | | | | | | Feature43 <= 19.736842

| | | | | | | | | Feature14 <= 2.409639

| | | | | | | | | | Feature135 <= 77.777778: 0 (26.0)

| | | | | | | | | | Feature135 > 77.777778: 1 (2.0)

| | | | | | | | | Feature14 > 2.409639

| | | | | | | | | | Feature56 <= 58.90411: 0 (5.0)

| | | | | | | | | | Feature56 > 58.90411: 1 (13.0)

| | | | | | | | Feature43 > 19.736842

| | | | | | | | | Feature125 <= 31.25: 0 (364.0/1.0)

| | | | | | | | | Feature125 > 31.25

| | | | | | | | | | Feature23 <= 45.652174

| | | | | | | | | | | antibacterial-peptides = 0

| | | | | | | | | | | | Feature167 <= 96.428571

| | | | | | | | | | | | | Feature58 <= 17.391304

| | | | | | | | | | | | | | Feature37 <= 0.990099: 1 (3.0)

| | | | | | | | | | | | | | Feature37 > 0.990099

| | | | | | | | | | | | | | | Feature132 <= 30.30303

| | | | | | | | | | | | | | | | Feature23 <= 39.02439: 0 (28.0)

| | | | | | | | | | | | | | | | Feature23 > 39.02439

| | | | | | | | | | | | | | | | | Feature13 <= 0.990099: 0 (7.0/1.0)

| | | | | | | | | | | | | | | | | Feature13 > 0.990099: 1 (2.0)

| | | | | | | | | | | | | | | Feature132 > 30.30303: 1 (3.0)

| | | | | | | | | | | | | Feature58 > 17.391304: 1 (6.0)

| | | | | | | | | | | | Feature167 > 96.428571: 0 (52.0)

| | | | | | | | | | | antibacterial-peptides = 1

| | | | | | | | | | | | Feature85 <= 55.844156

| | | | | | | | | | | | | Feature151 <= 35.714286

| | | | | | | | | | | | | | Feature69 <= 1.149425

| | | | | | | | | | | | | | | Feature62 <= 89.285714: 1 (3.0)

| | | | | | | | | | | | | | | Feature62 > 89.285714: 0 (14.0)

| | | | | | | | | | | | | | Feature69 > 1.149425: 0 (322.0)

| | | | | | | | | | | | | Feature151 > 35.714286

| | | | | | | | | | | | | | Feature164 <= 19.565217: 0 (17.0)

| | | | | | | | | | | | | | Feature164 > 19.565217: 1 (7.0/1.0)

| | | | | | | | | | | | Feature85 > 55.844156

| | | | | | | | | | | | | Feature123 <= 61.038961: 0 (16.0)

| | | | | | | | | | | | | Feature123 > 61.038961: 1 (7.0)

| | | | | | | | | | Feature23 > 45.652174

| | | | | | | | | | | Feature131 <= 18.666667: 1 (12.0/1.0)

| | | | | | | | | | | Feature131 > 18.666667: 0 (14.0/1.0)

| | | | | | | Feature5 > 10.526316

| | | | | | | | Feature56 <= 85

| | | | | | | | | Feature88 <= 12.121212: 0 (50.0)

| | | | | | | | | Feature88 > 12.121212

| | | | | | | | | | Feature165 <= 41.584158

| | | | | | | | | | | Feature43 <= 29.268293: 0 (12.0)

| | | | | | | | | | | Feature43 > 29.268293

| | | | | | | | | | | | Feature19 <= 3.846154

| | | | | | | | | | | | | Feature6 <= 18.75

| | | | | | | | | | | | | | Feature14 <= 4.109589

| | | | | | | | | | | | | | | Feature97 <= 30.985915: 0 (2.0)

| | | | | | | | | | | | | | | Feature97 > 30.985915: 1 (19.0/1.0)

| | | | | | | | | | | | | | Feature14 > 4.109589: 0 (2.0)

| | | | | | | | | | | | | Feature6 > 18.75: 0 (6.0)

| | | | | | | | | | | | Feature19 > 3.846154: 0 (3.0)

| | | | | | | | | | Feature165 > 41.584158: 0 (21.0)

| | | | | | | | Feature56 > 85: 1 (7.0)

| | | | | | Feature46 > 28.125: 0 (369.0/2.0)

| | | | Feature154 > 40.625

| | | | | Feature41 <= 81.481481: 1 (8.0)

| | | | | Feature41 > 81.481481

| | | | | | Feature52 <= 77.272727: 1 (5.0/1.0)

| | | | | | Feature52 > 77.272727: 0 (25.0)

| | | Feature133 > 45

| | | | Feature147 <= 62.068966: 0 (16.0)

| | | | Feature147 > 62.068966: 1 (14.0/1.0)

| | Feature2 > 19.047619

| | | Feature8 <= 9.375

| | | | Feature76 <= 13.333333: 1 (11.0)

| | | | Feature76 > 13.333333

| | | | | antibacterial-peptides = 0

| | | | | | Feature184 <= 10

| | | | | | | Feature15 <= 3.225806: 1 (7.0)

| | | | | | | Feature15 > 3.225806: 0 (4.0/1.0)

| | | | | | Feature184 > 10: 0 (9.0)

| | | | | antibacterial-peptides = 1: 0 (34.0)

| | | Feature8 > 9.375: 1 (18.0)

| Feature18 > 22.222222

| | Feature15 <= 2.941176

| | | Feature27 <= 46.153846: 1 (19.0)

| | | Feature27 > 46.153846: 0 (2.0)

| | Feature15 > 2.941176: 0 (9.0)

Feature152 > 39.393939

| Feature175 <= 19.148936

| | Feature109 <= 3.508772

| | | Feature9 <= 8.823529: 1 (28.0/1.0)

| | | Feature9 > 8.823529: 0 (2.0)

| | Feature109 > 3.508772: 0 (2.0)

| Feature175 > 19.148936: 0 (7.0)

Number of Leaves : 54

Size of the tree : 107

meka.classifiers.multilabel.BCC: Node #15

J48 pruned tree

------------------

Feature40 <= 86

| Feature42 <= 53.191489

| | Feature44 <= 33.707865: 0 (943.0/1.0)

| | Feature44 > 33.707865

| | | Feature111 <= 3.703704

| | | | Feature11 <= 3.225806

| | | | | Feature136 <= 82.352941: 1 (3.0)

| | | | | Feature136 > 82.352941

| | | | | | antibacterial-peptides = 0

| | | | | | | Feature152 <= 18.604651: 0 (5.0)

| | | | | | | Feature152 > 18.604651: 1 (2.0)

| | | | | | antibacterial-peptides = 1: 0 (40.0)

| | | | Feature11 > 3.225806: 1 (3.0)

| | | Feature111 > 3.703704

| | | | Feature1 <= 15.625: 0 (393.0/2.0)

| | | | Feature1 > 15.625

| | | | | Feature44 <= 36.25: 1 (5.0)

| | | | | Feature44 > 36.25: 0 (27.0)

| Feature42 > 53.191489

| | Feature70 <= 32.55814

| | | Feature185 <= 22.307692: 0 (152.0)

| | | Feature185 > 22.307692

| | | | Feature37 <= 6.896552

| | | | | Feature54 <= 22.727273

| | | | | | Feature60 <= 67.647059: 0 (26.0)

| | | | | | Feature60 > 67.647059

| | | | | | | antibacterial-peptides = 0: 0 (3.0)

| | | | | | | antibacterial-peptides = 1: 1 (6.0)

| | | | | Feature54 > 22.727273: 1 (7.0)

| | | | Feature37 > 6.896552: 0 (46.0)

| | Feature70 > 32.55814

| | | Feature107 <= 4.347826: 0 (9.0)

| | | Feature107 > 4.347826: 1 (8.0)

Feature40 > 86

| Feature2 <= 19.354839: 0 (37.0)

| Feature2 > 19.354839: 1 (12.0)

Number of Leaves : 19

Size of the tree : 37

meka.classifiers.multilabel.BCC: Node #16

J48 pruned tree

------------------

Feature36 <= 5.882353

| Feature45 <= 9.090909: 1 (24.0)

| Feature45 > 9.090909: 0 (2.0)

Feature36 > 5.882353

| Feature97 <= 72.727273

| | Feature120 <= 87.5

| | | Feature49 <= 4.761905: 1 (7.0)

| | | Feature49 > 4.761905: 0 (20.0)

| | Feature120 > 87.5

| | | Feature25 <= 45

| | | | Feature133 <= 35.897436

| | | | | Feature47 <= 32.55814: 0 (1405.0/2.0)

| | | | | Feature47 > 32.55814

| | | | | | antibacterial-peptides = 0

| | | | | | | Feature49 <= 7.407407: 0 (12.0)

| | | | | | | Feature49 > 7.407407: 1 (7.0/1.0)

| | | | | | antibacterial-peptides = 1: 0 (91.0)

| | | | Feature133 > 35.897436

| | | | | Feature154 <= 35.064935

| | | | | | Feature144 <= 50.574713: 0 (77.0)

| | | | | | Feature144 > 50.574713

| | | | | | | Feature3 <= 1.5625: 1 (3.0)

| | | | | | | Feature3 > 1.5625: 0 (3.0)

| | | | | Feature154 > 35.064935

| | | | | | Feature61 <= 78.125: 0 (7.0/1.0)

| | | | | | Feature61 > 78.125: 1 (5.0)

| | | Feature25 > 45

| | | | Feature168 <= 60.714286: 0 (23.0)

| | | | Feature168 > 60.714286: 1 (6.0/1.0)

| Feature97 > 72.727273

| | Feature38 <= 21.276596: 0 (19.0)

| | Feature38 > 21.276596: 1 (16.0/1.0)

Number of Leaves : 17

Size of the tree : 33