

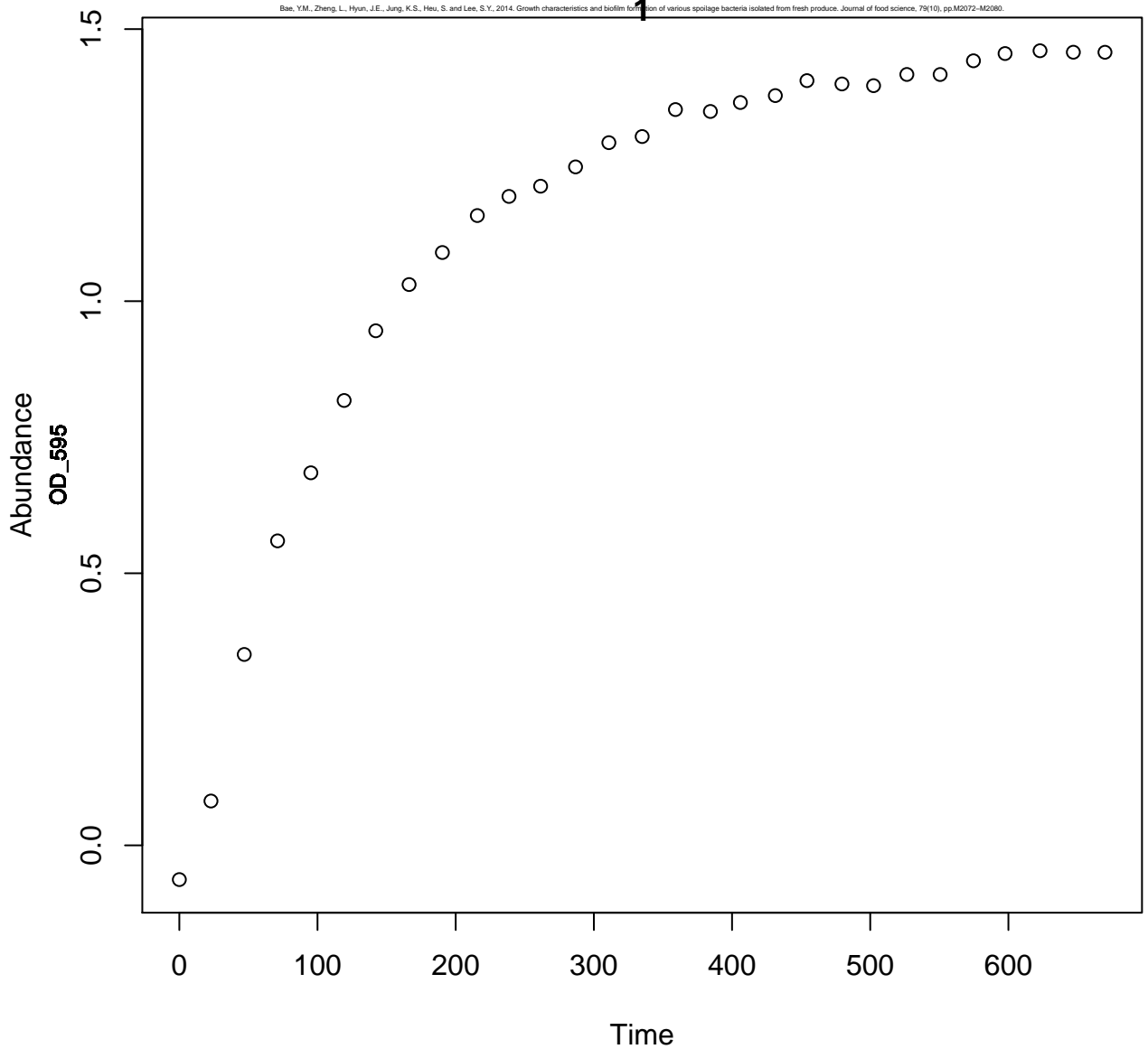
# Chryseobacterium.balustinum

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



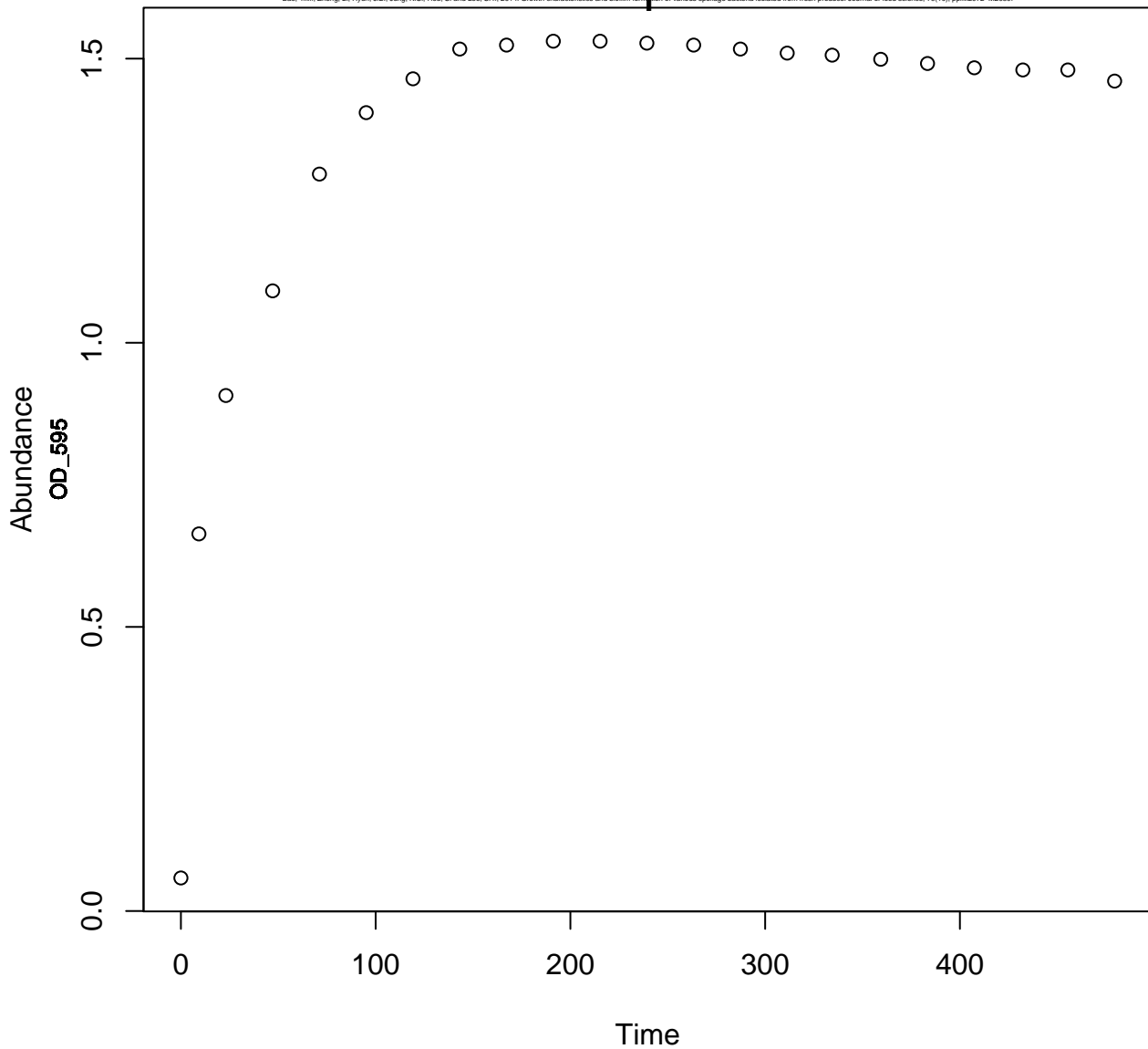
# Chryseobacterium.balustinum

TSB

15

1

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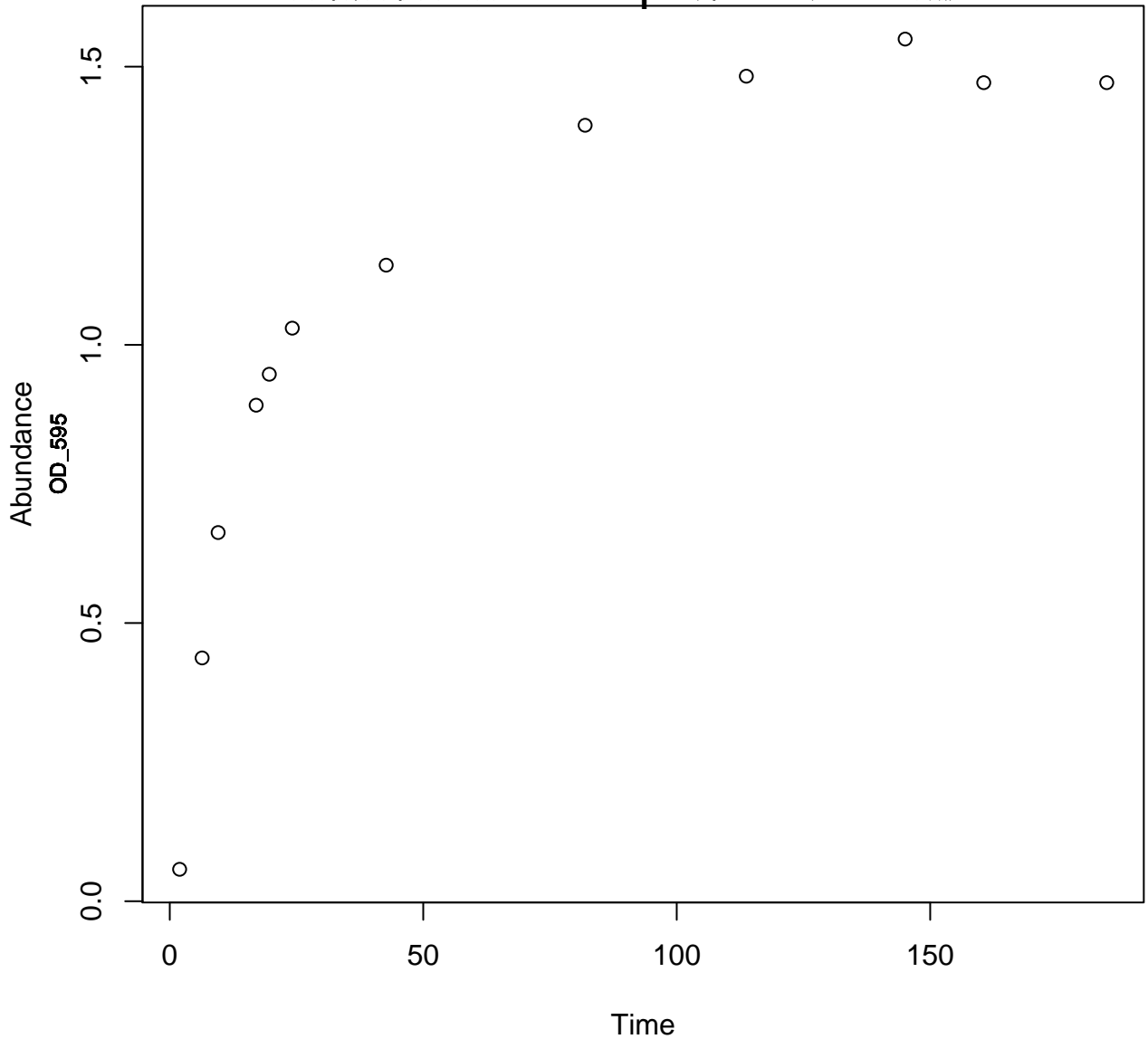
# Chryseobacterium.balustinum

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



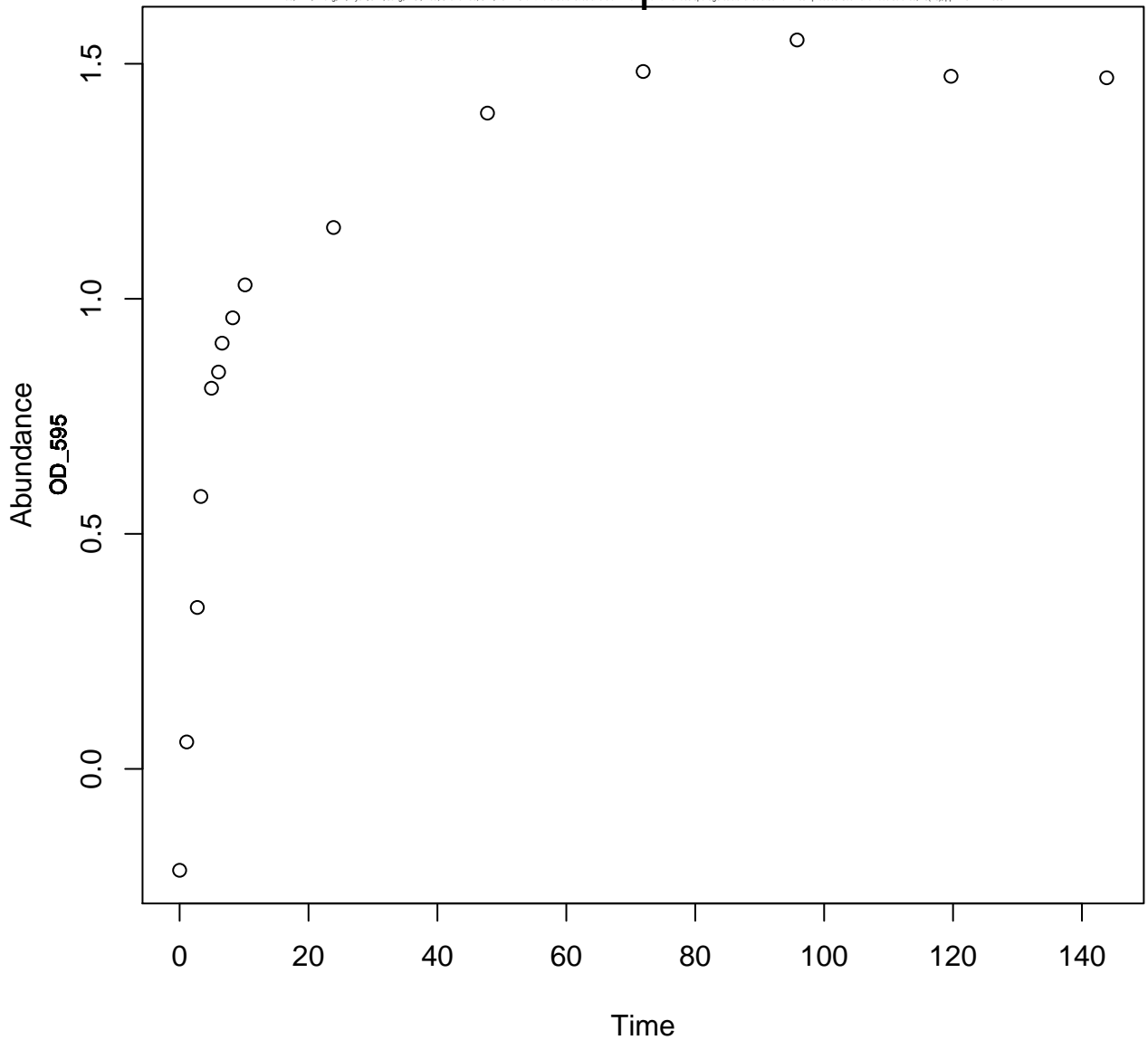
# Chryseobacterium.balustinum

TSB

35

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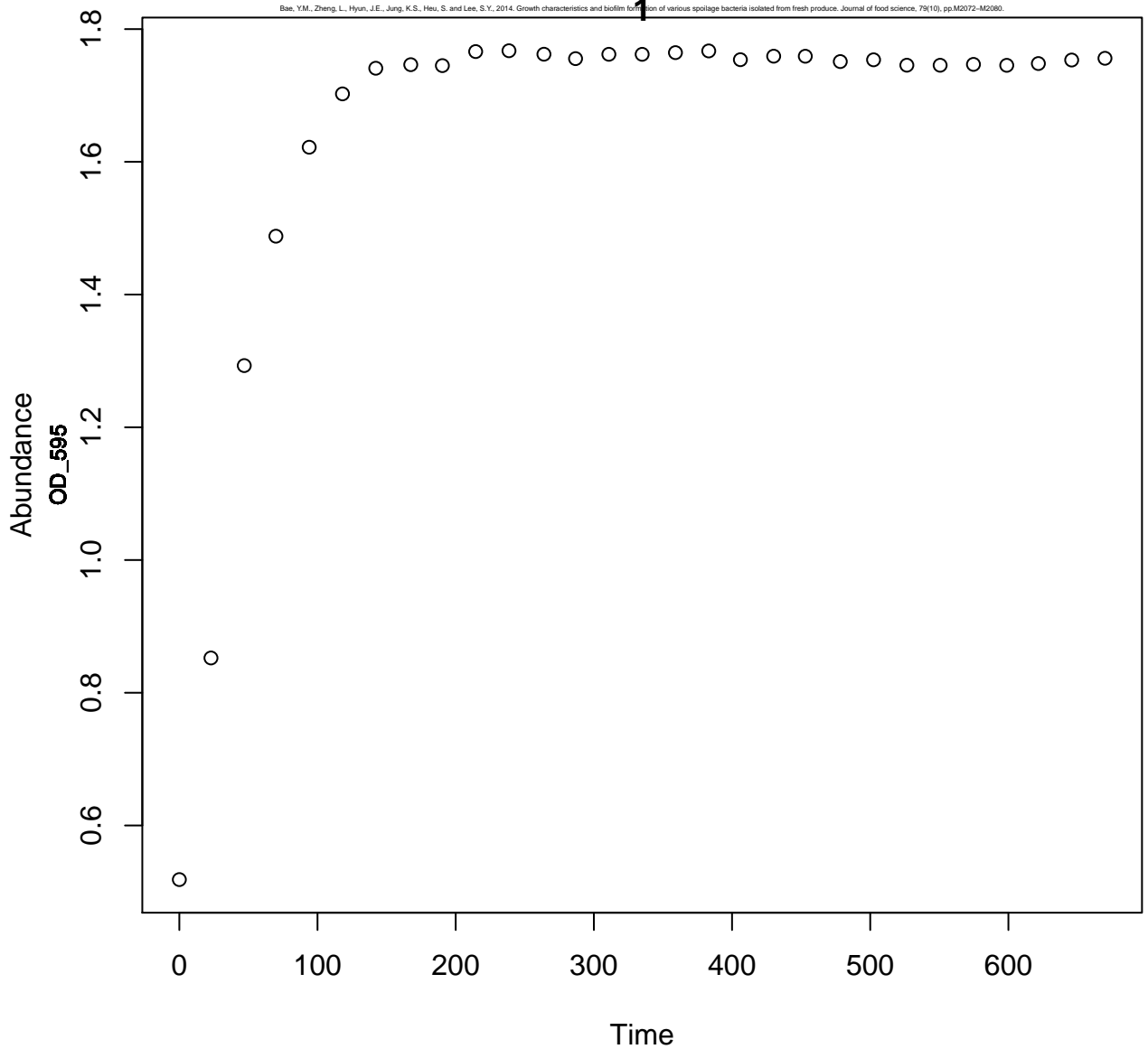
# Enterobacter.sp.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



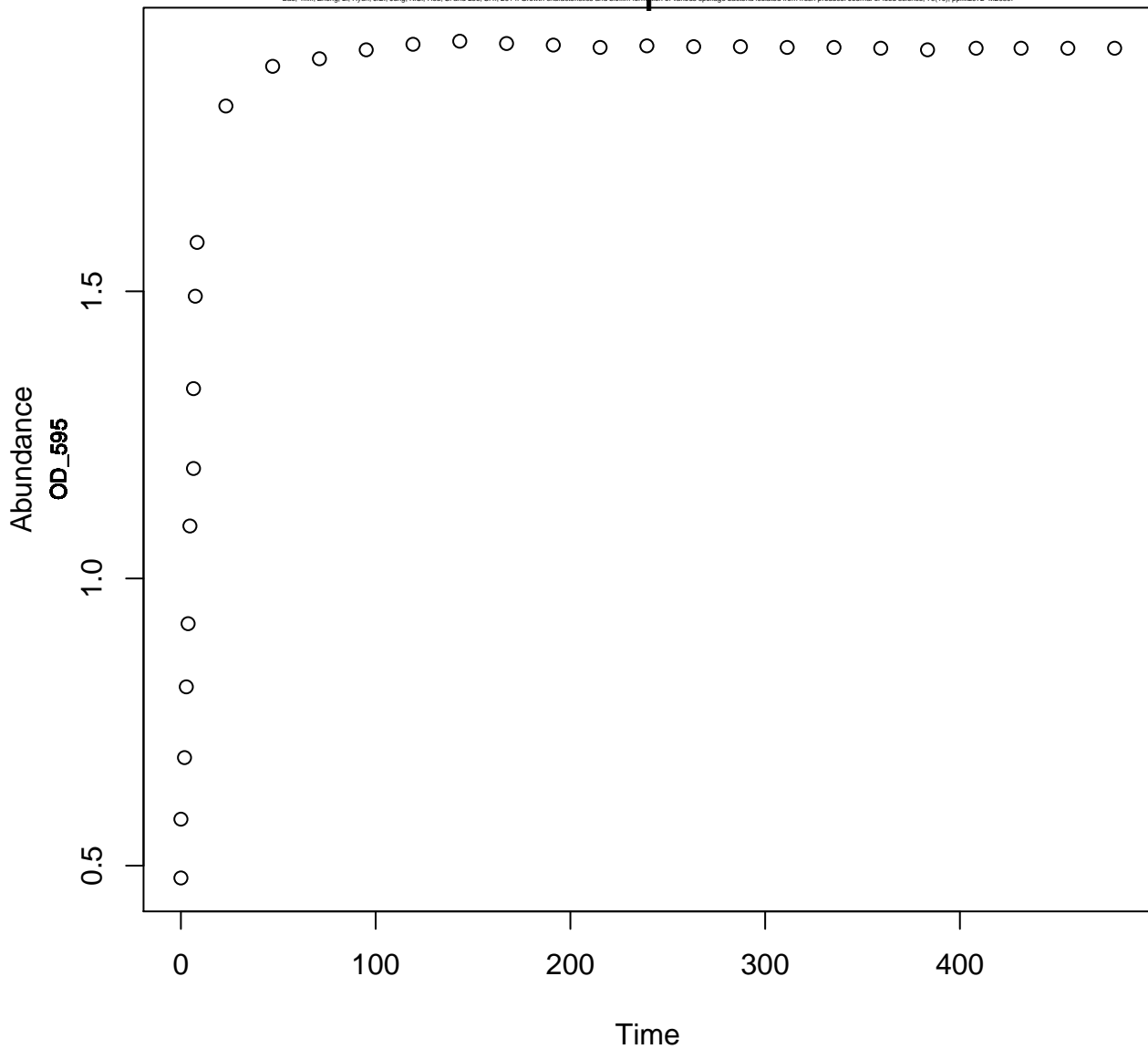
Enterobacter.sp.

TSB

15

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



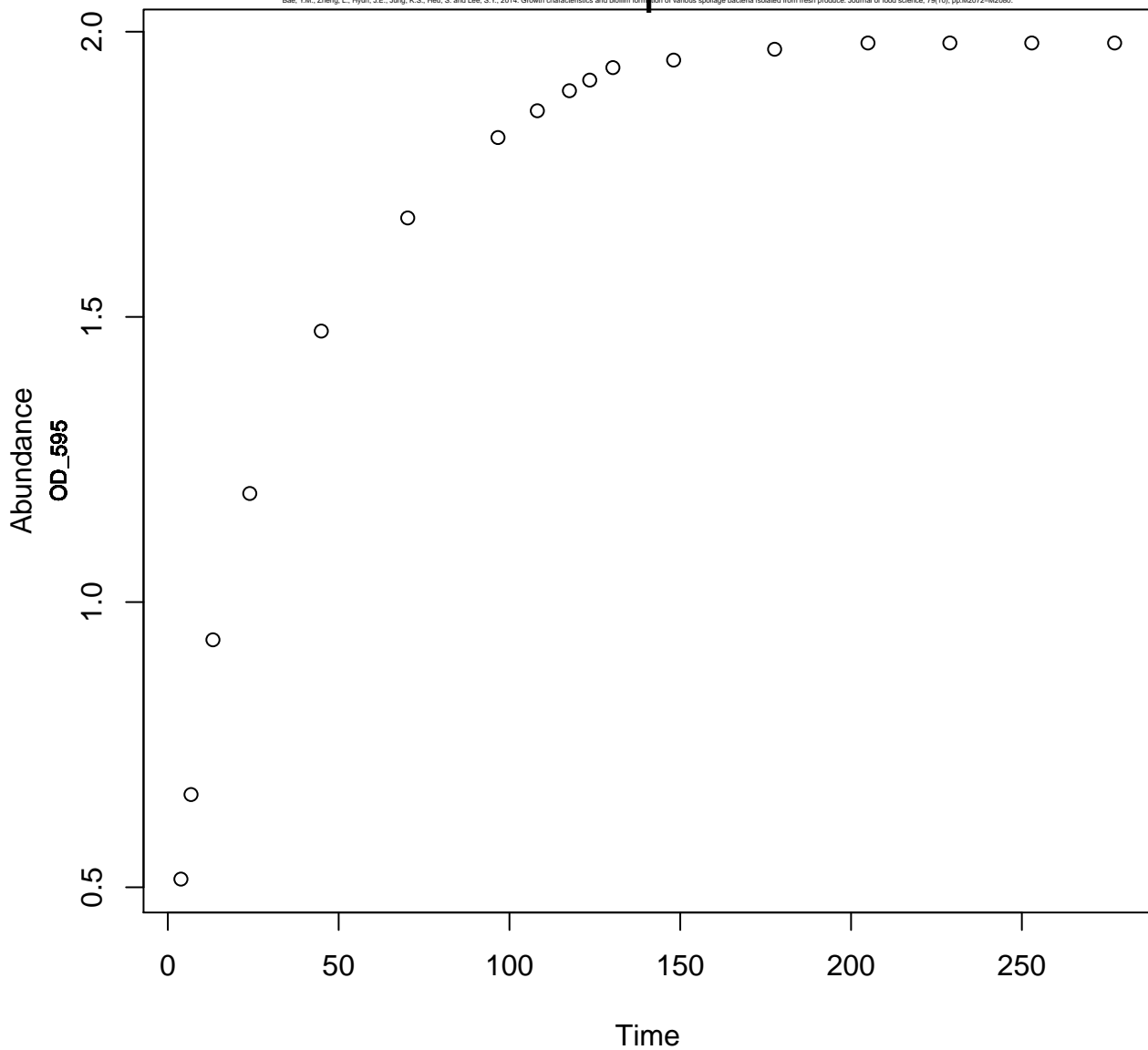
# Enterobacter.sp.

TSB

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



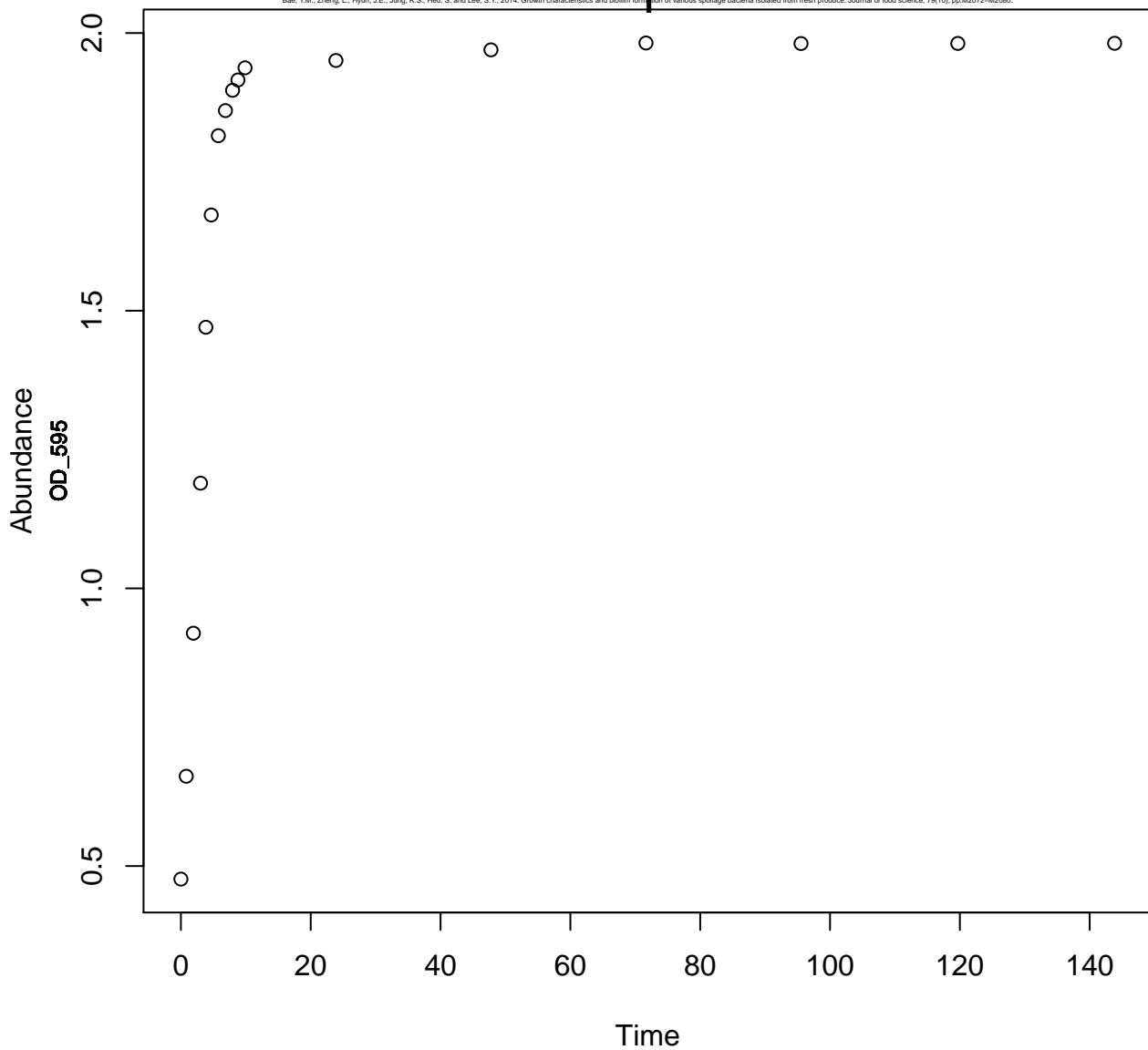
**Enterobacter.sp.**

**TSB**

**35**

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. *Journal of food science*, 79(10), pp.M2072-M2080.





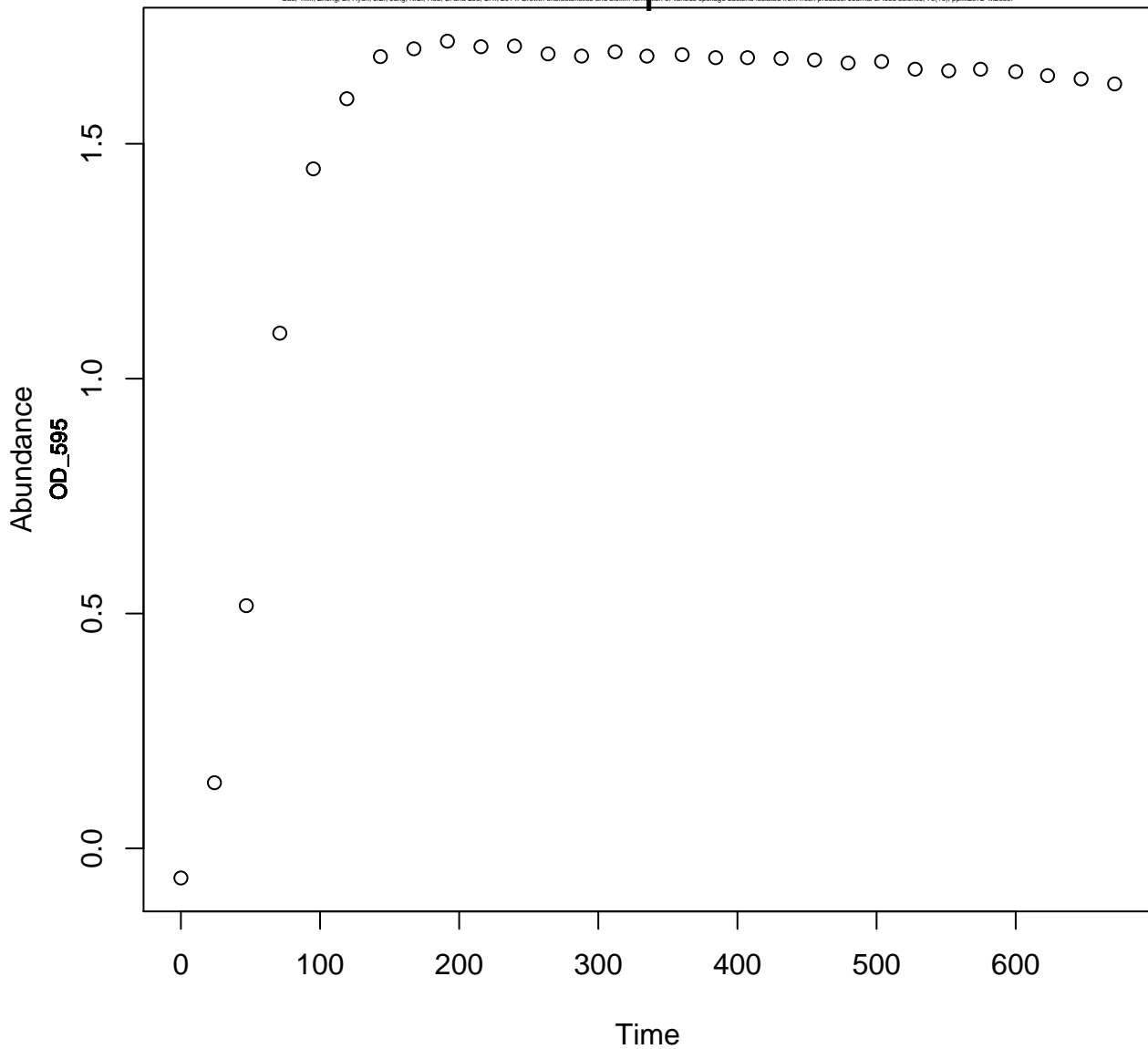
# Pantoea.agglomerans.1

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



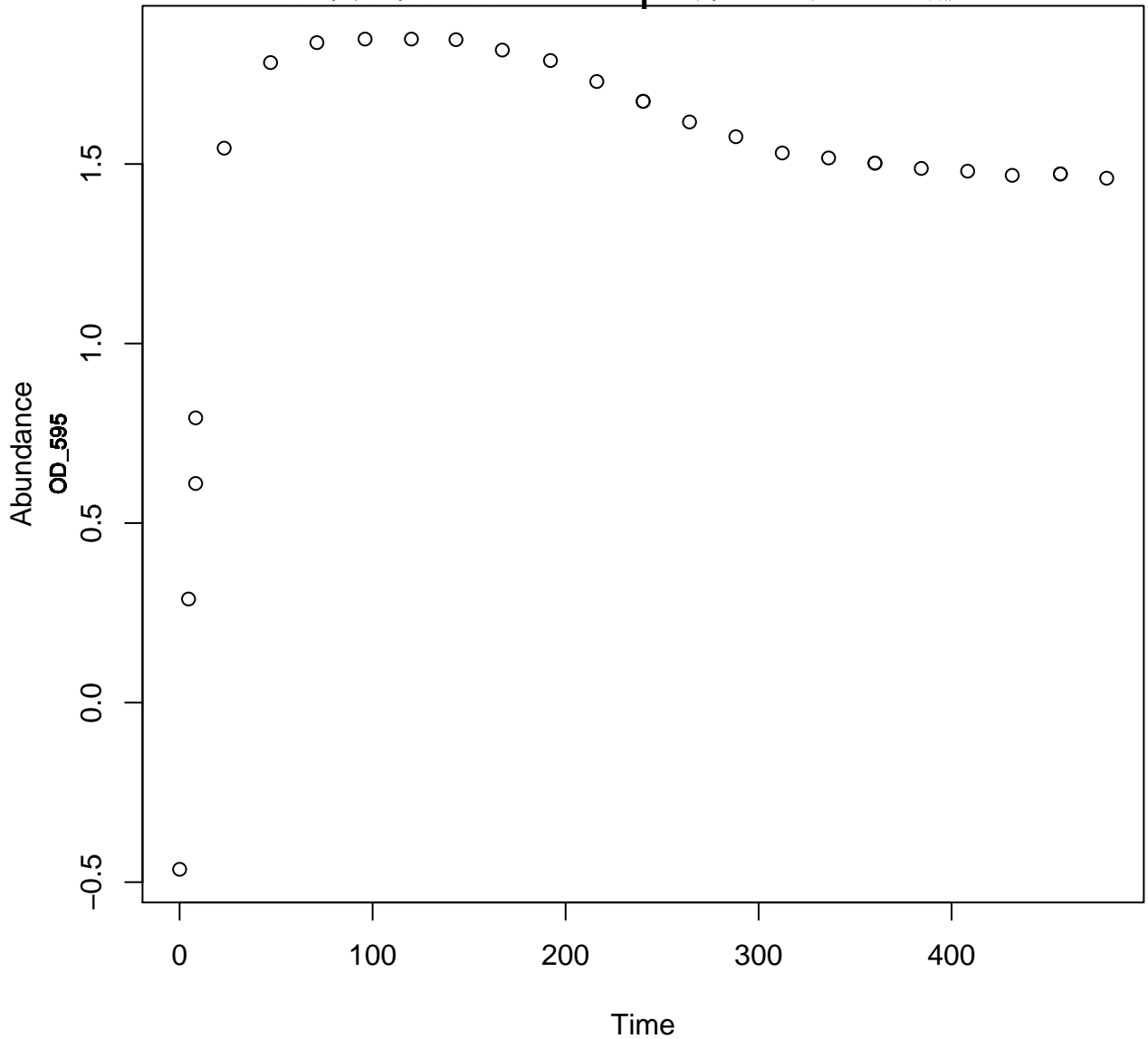
# Pantoea.agglomerans.1

TSB

15

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



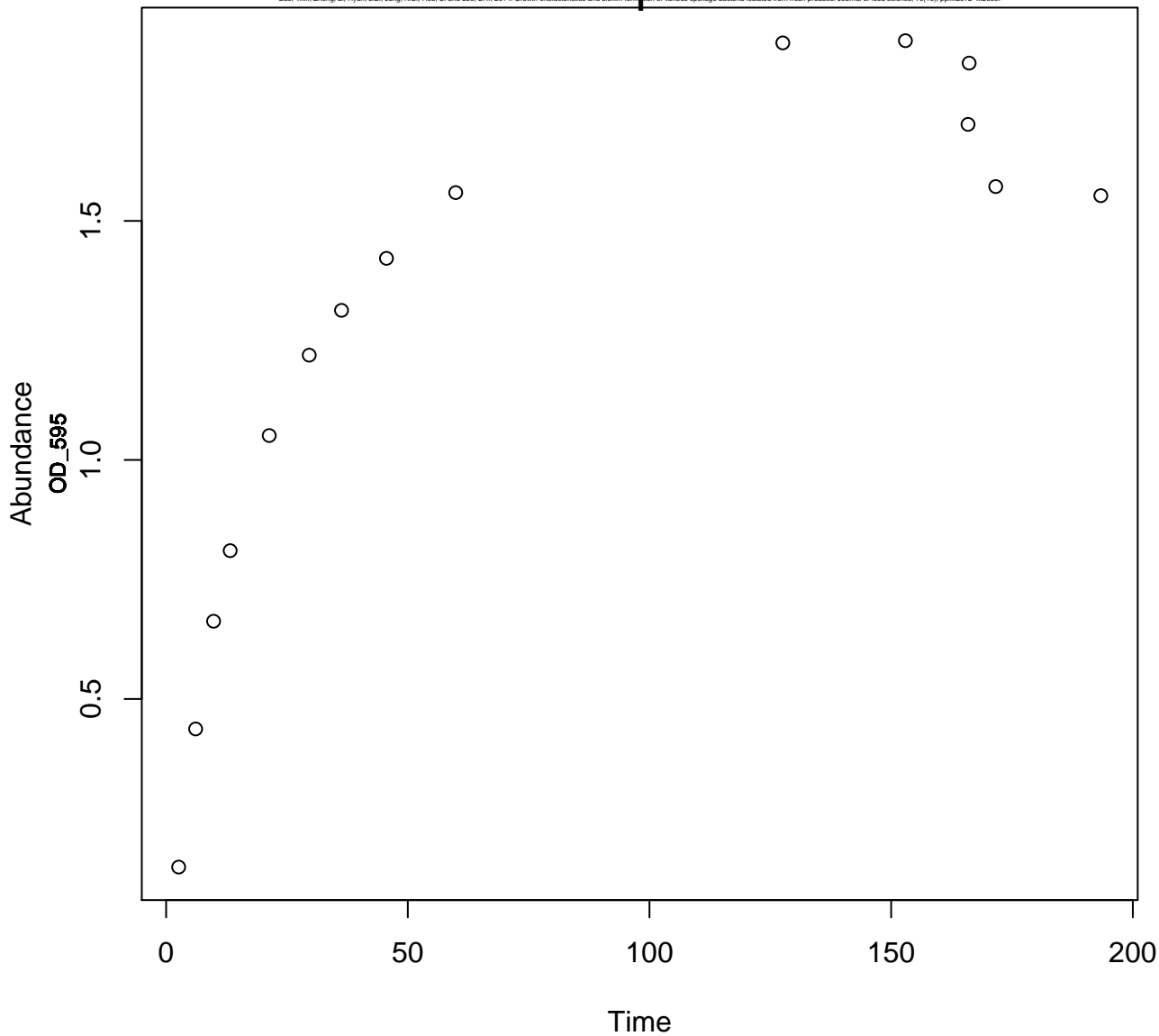
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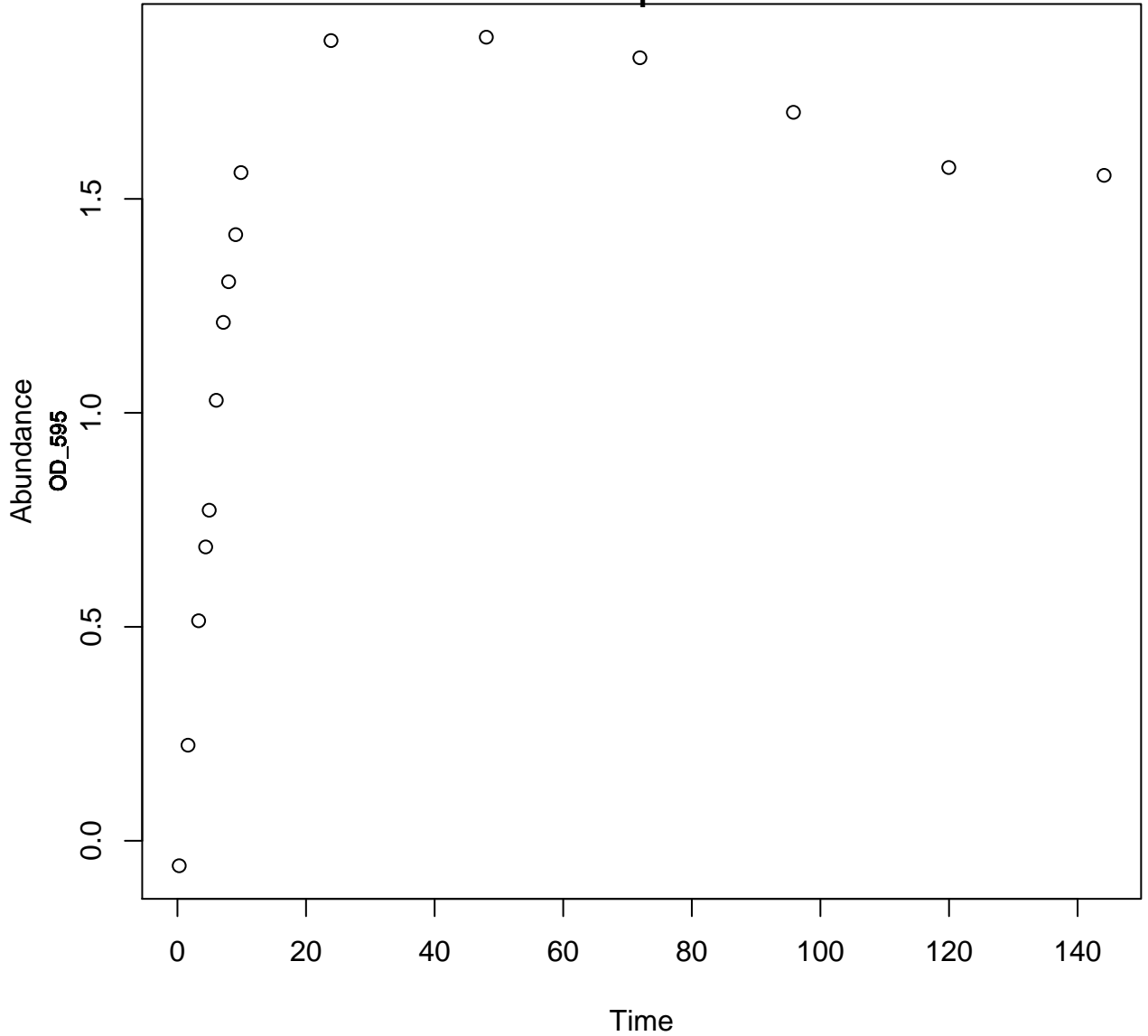
# Pantoea.agglomerans.1

TSB

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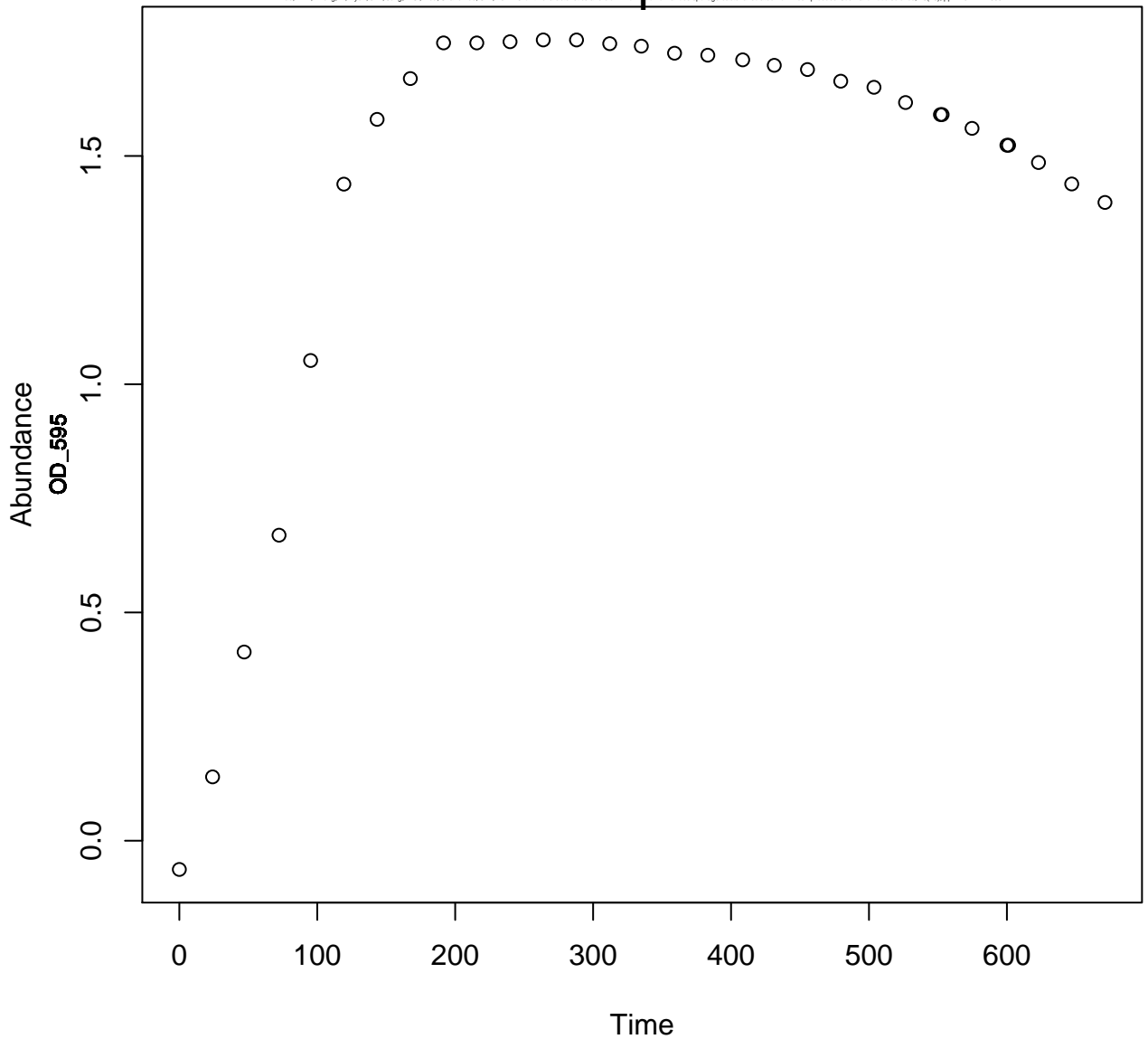
# Pantoea.agglomerans.2

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



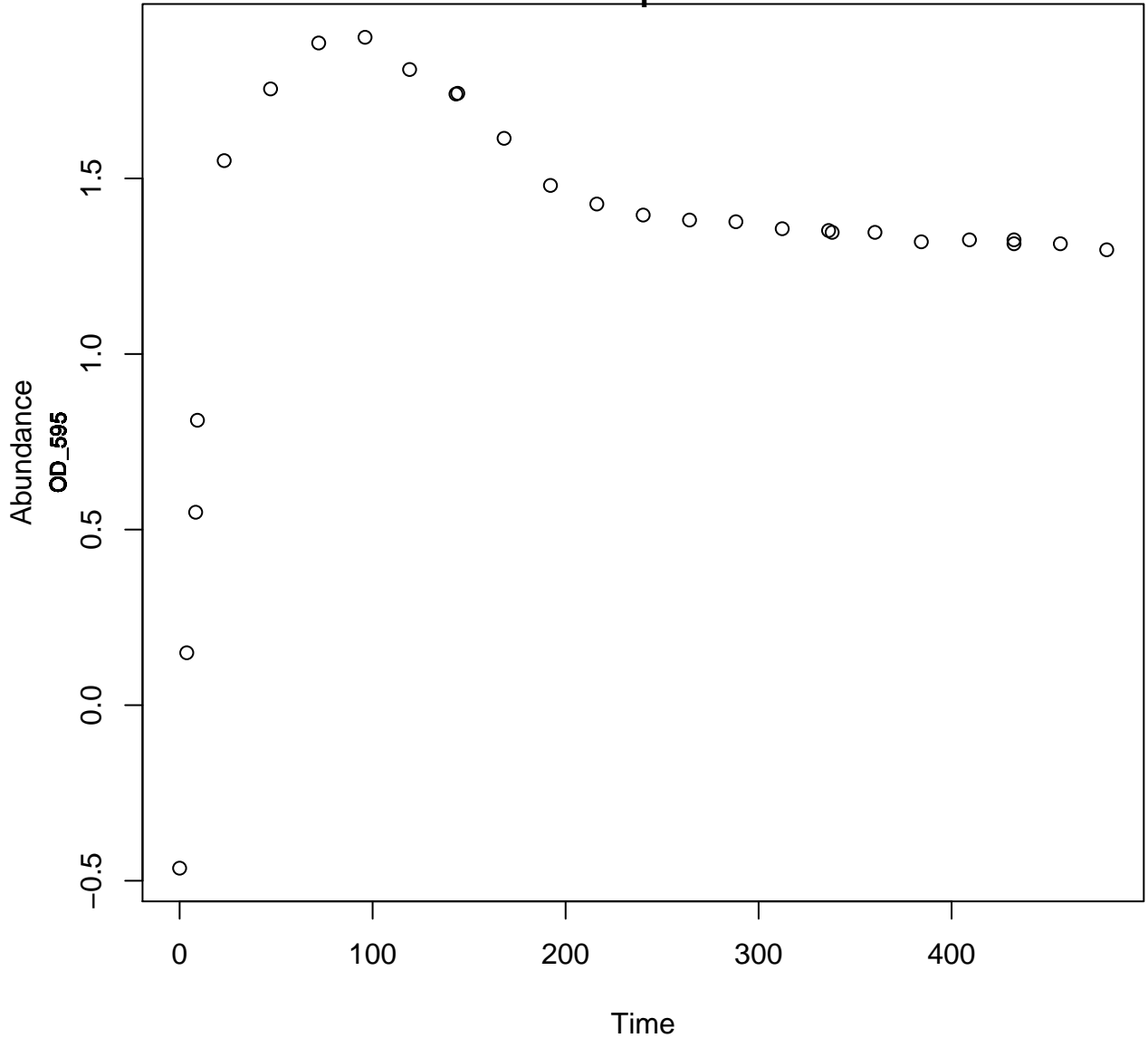
# Pantoea.agglomerans.2

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



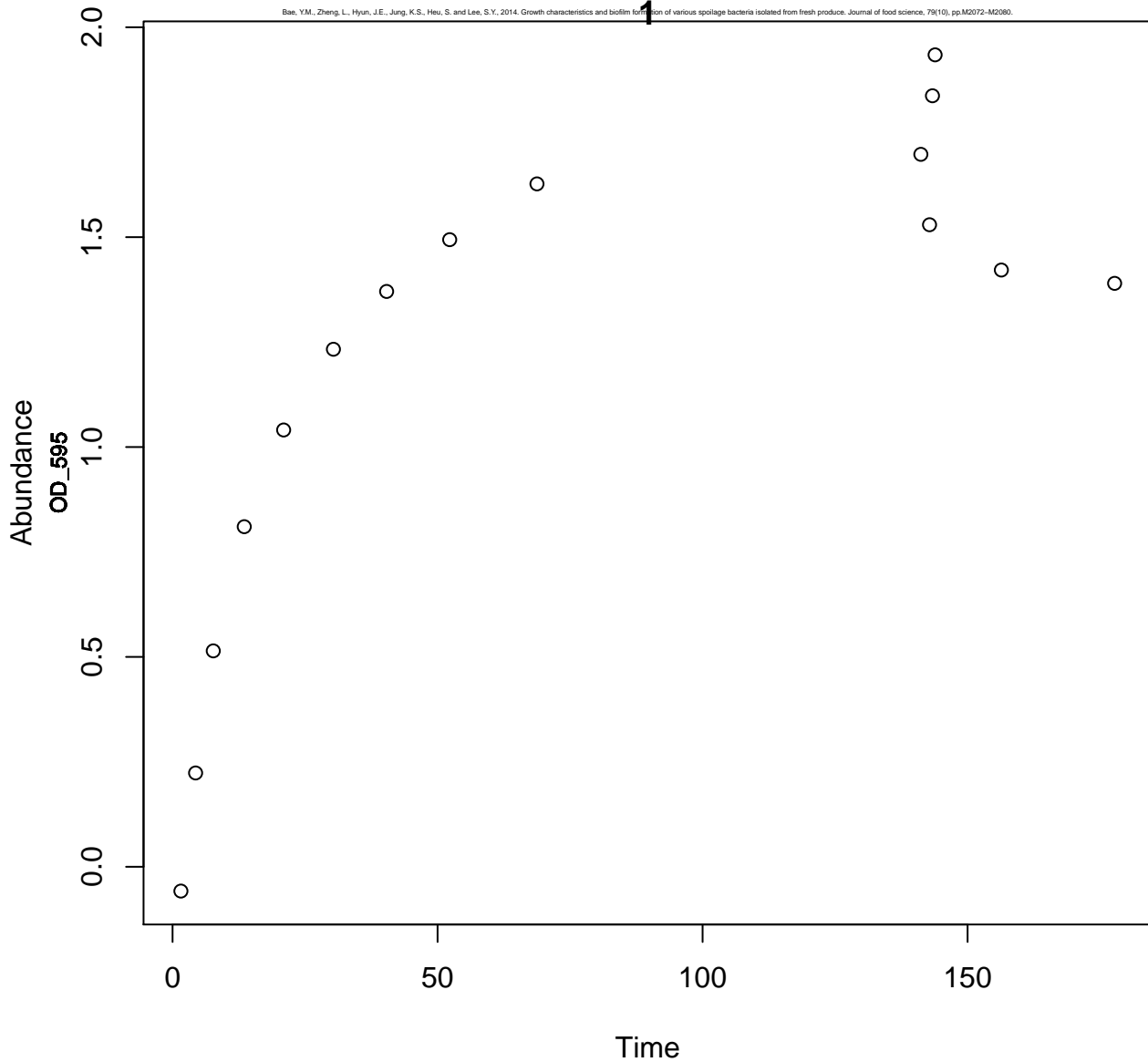
# Pantoea.agglomerans.2

TSB

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



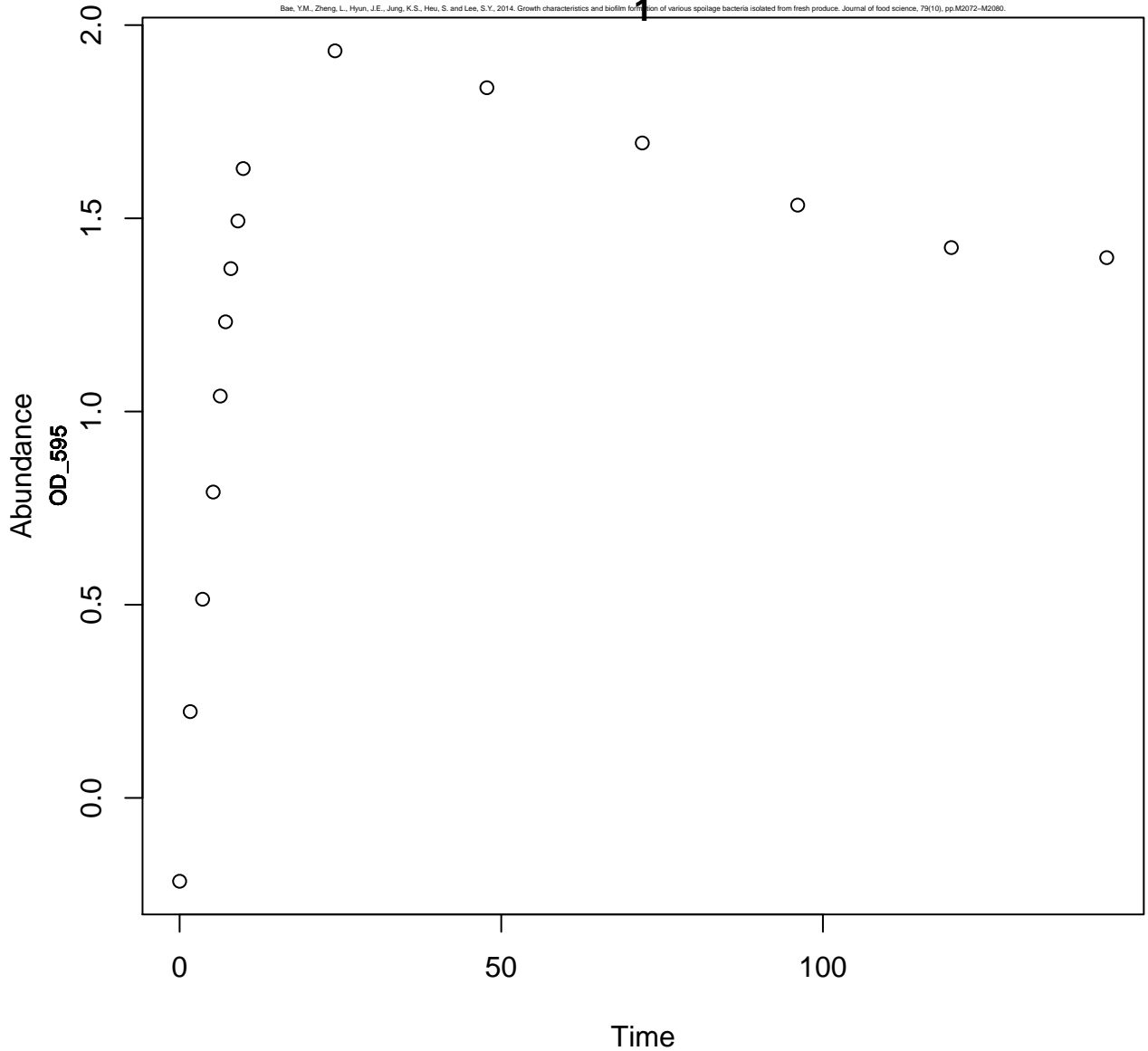
# Pantoea.agglomerans.2

TSB

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





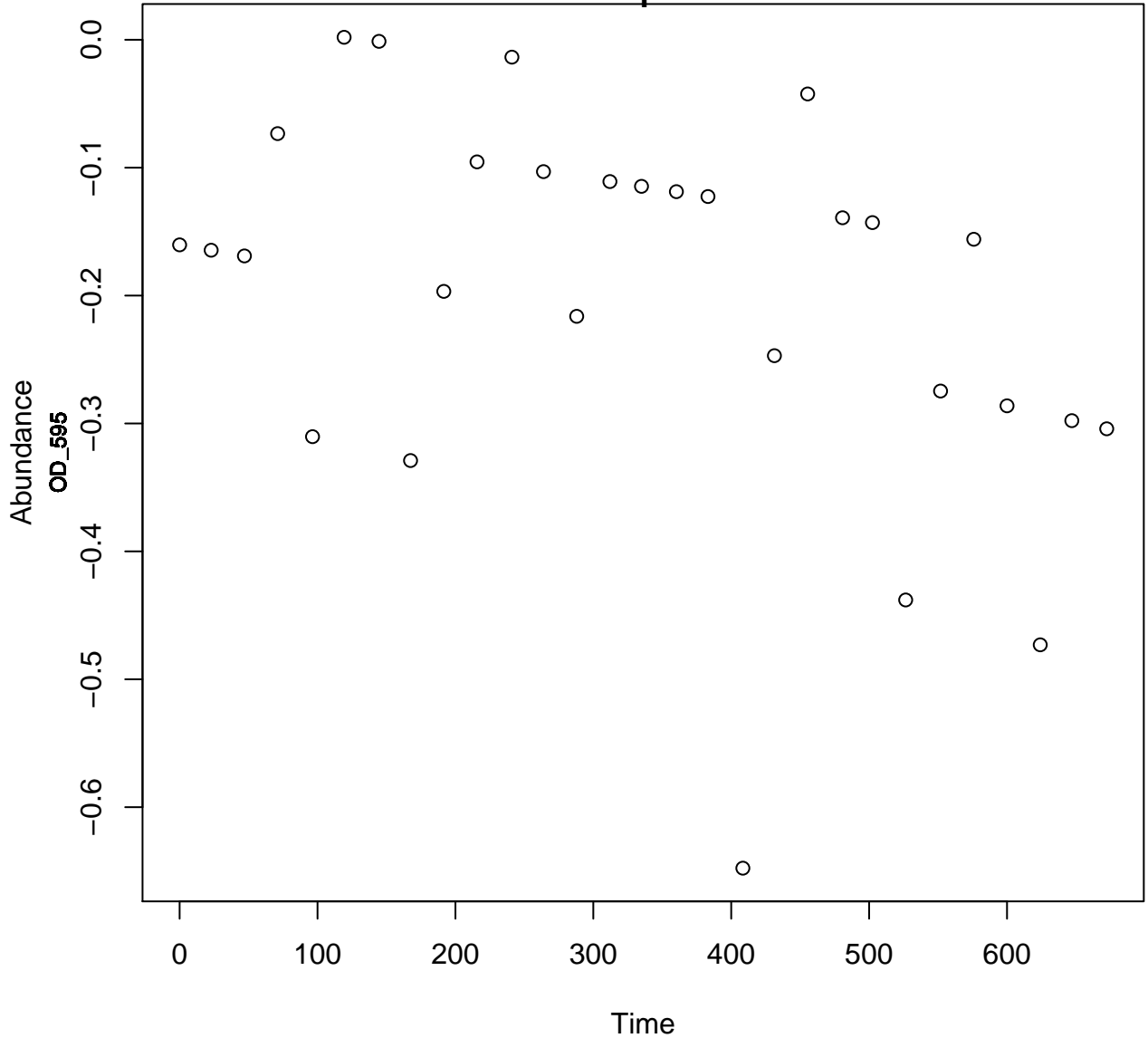
# Bacillus.pumilus

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



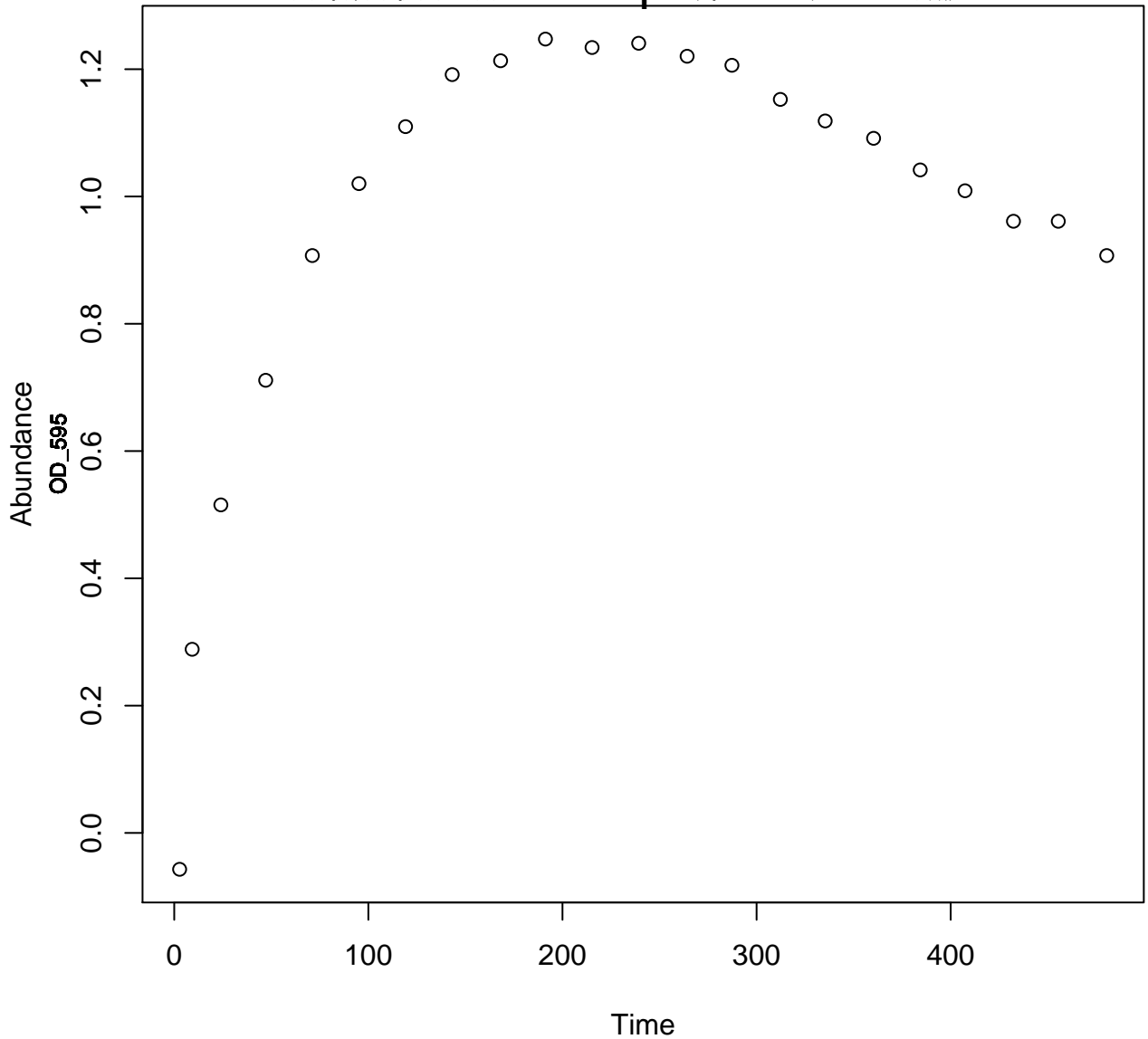
# Bacillus.pumilus

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



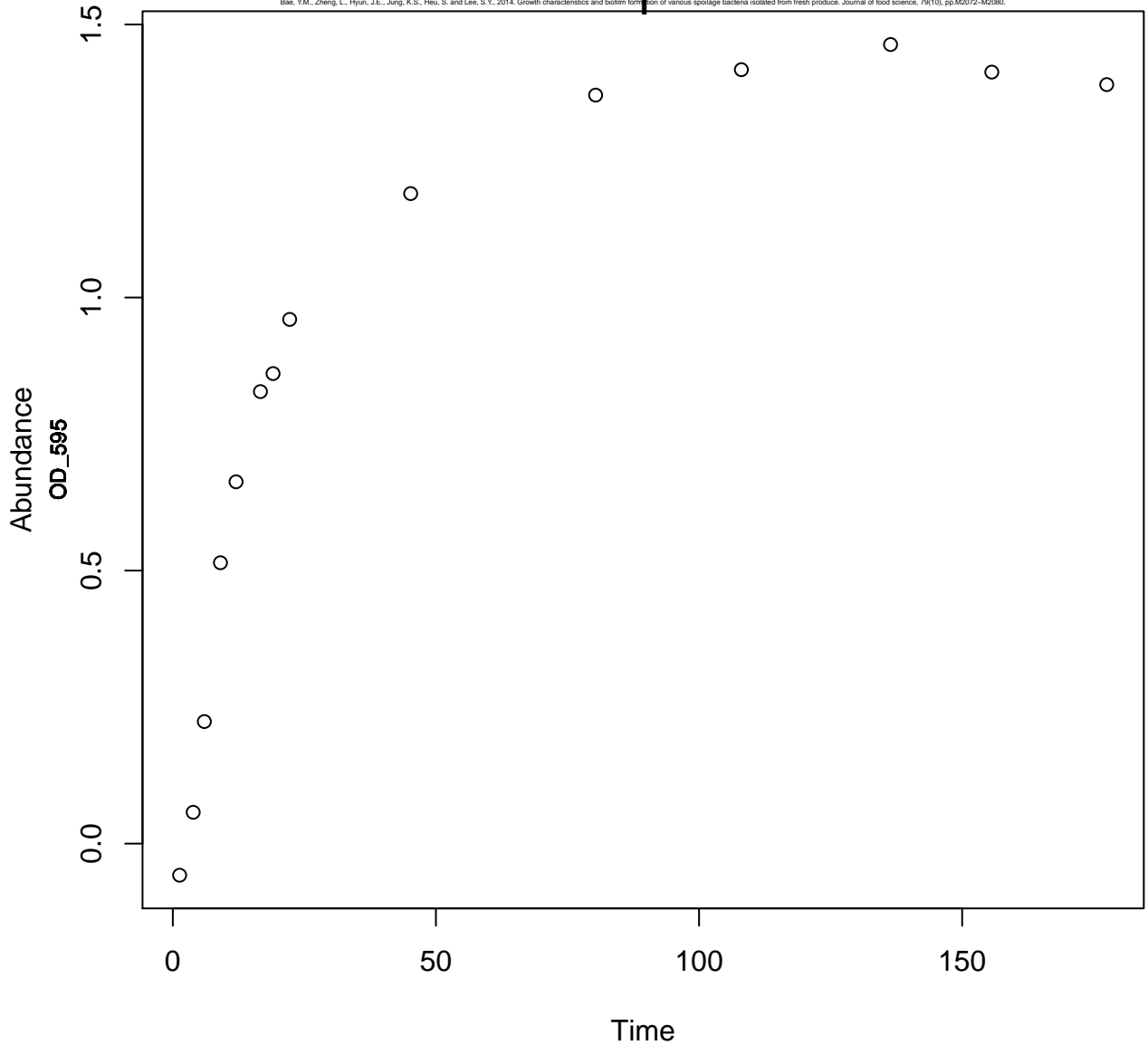
# Bacillus.pumilus

TSB

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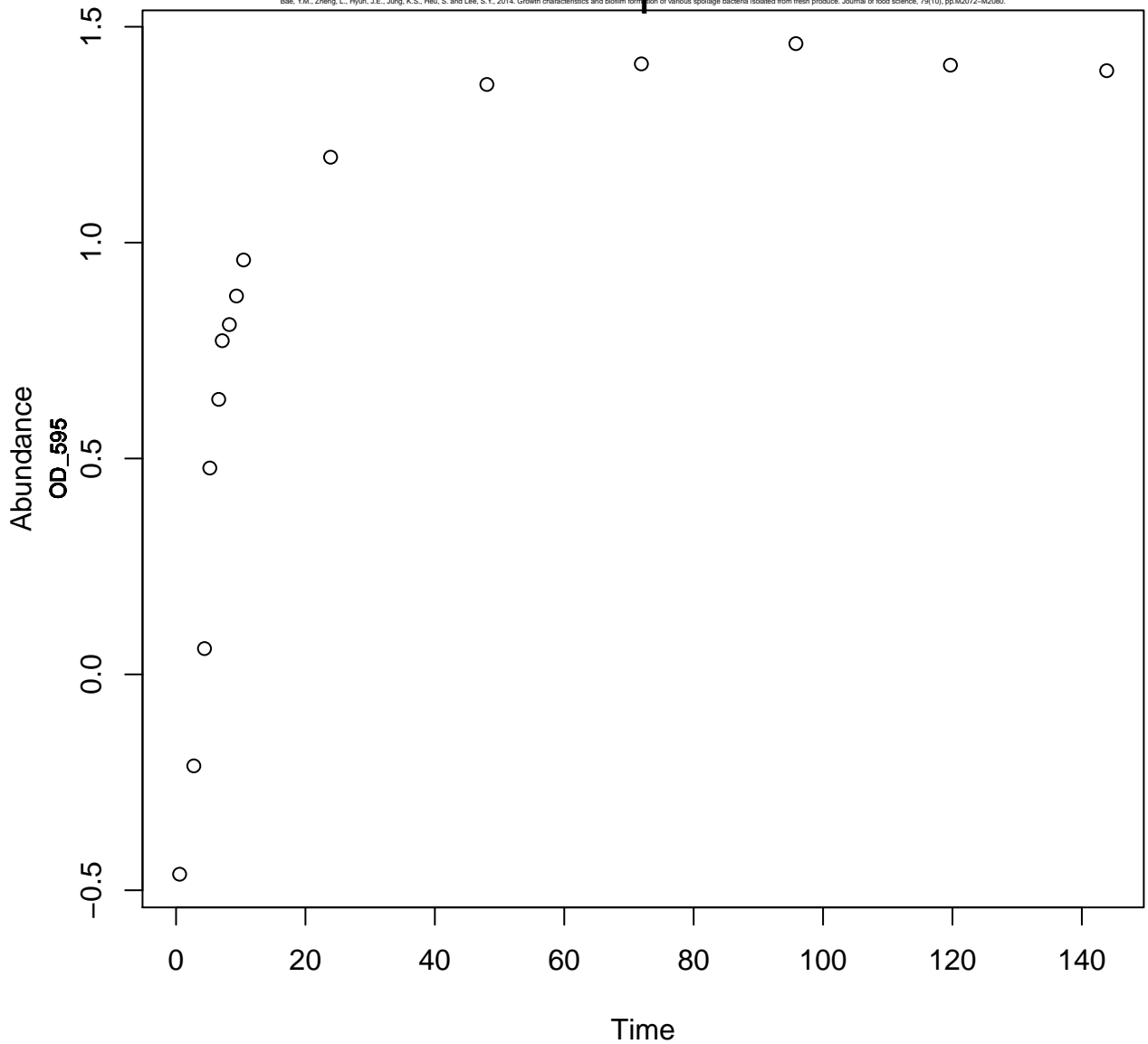
# Bacillus.pumilus

TSB

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



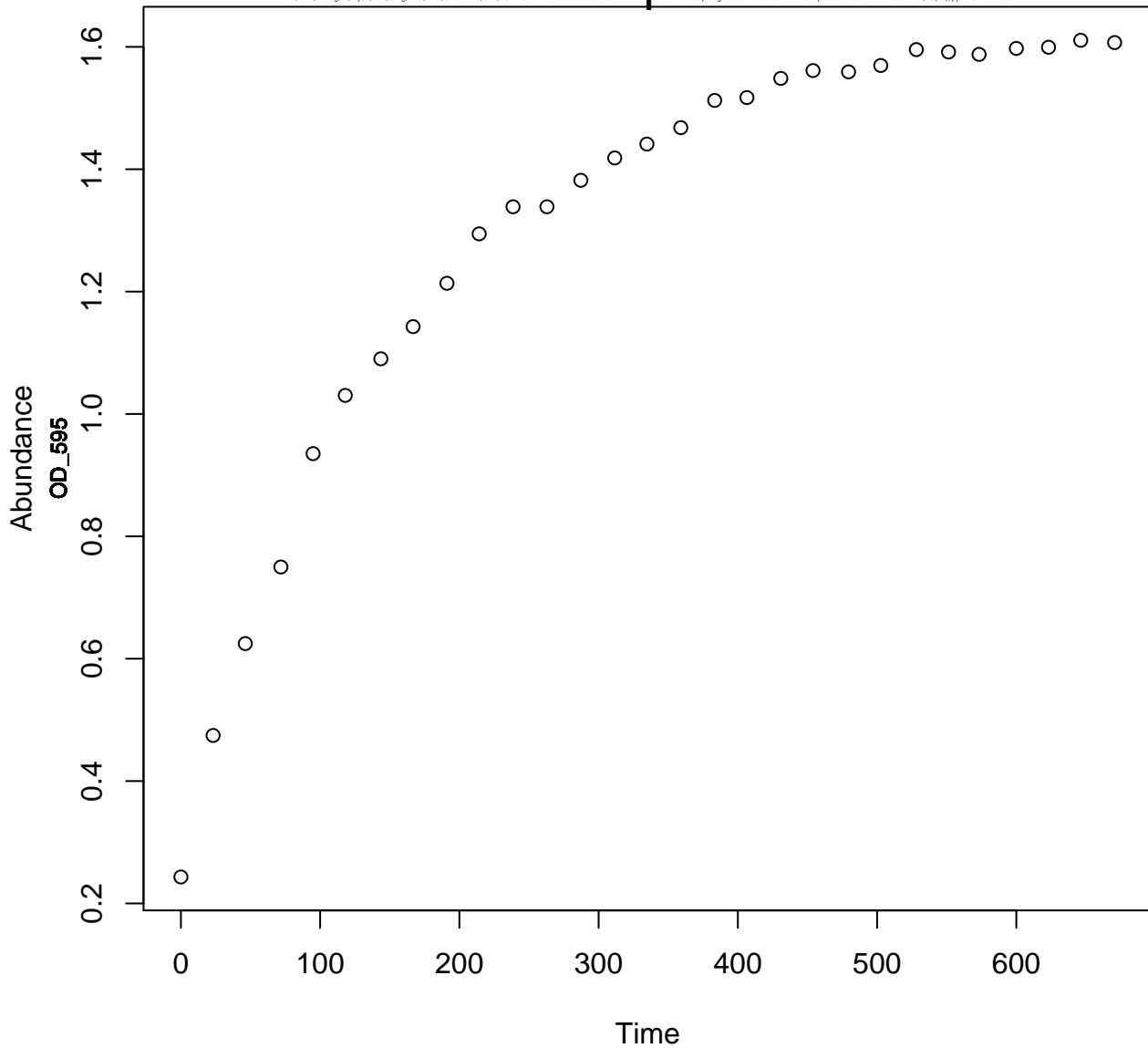
# Clavibacter.michiganensis

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



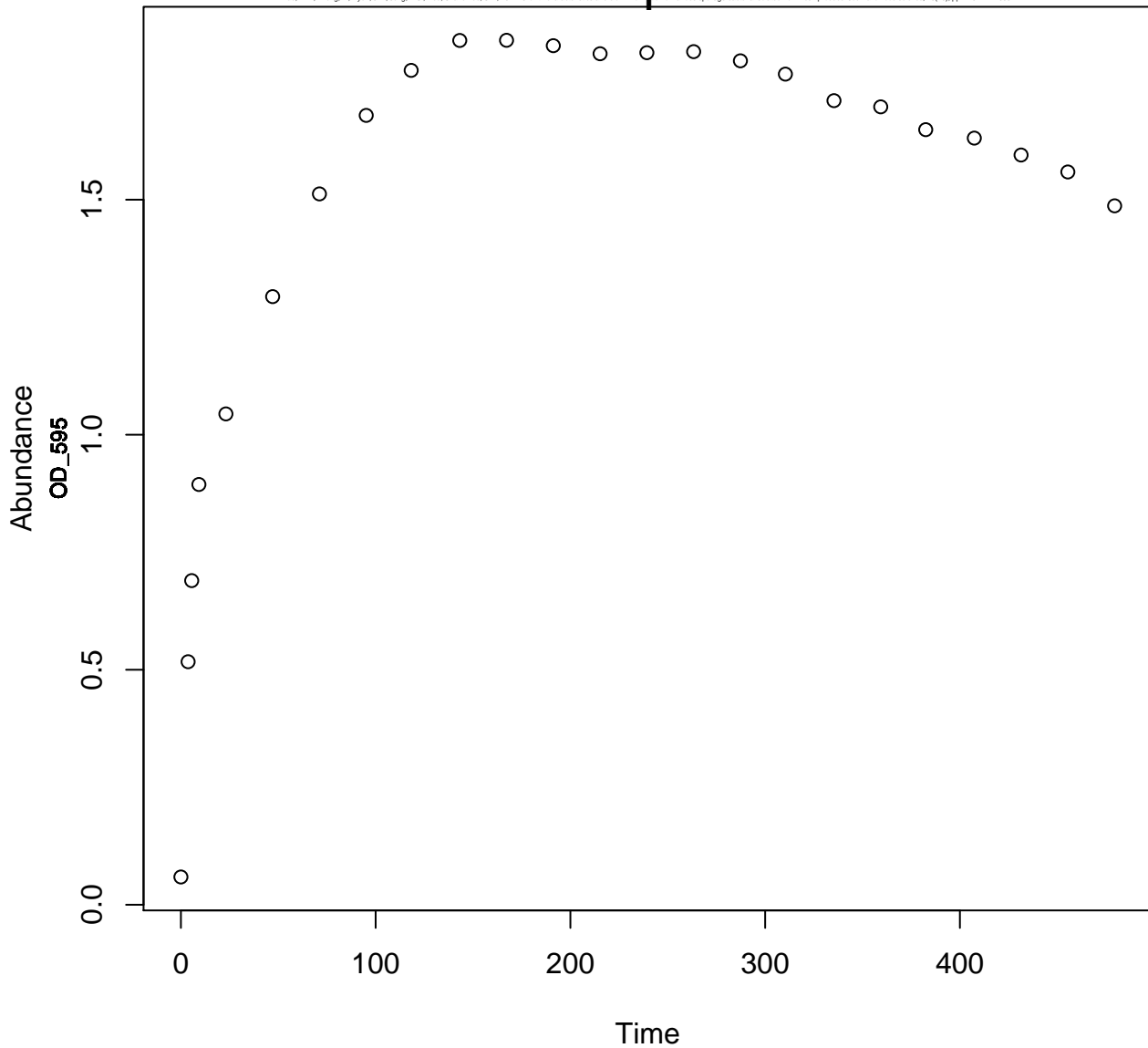
# Clavibacter.michiganensis

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



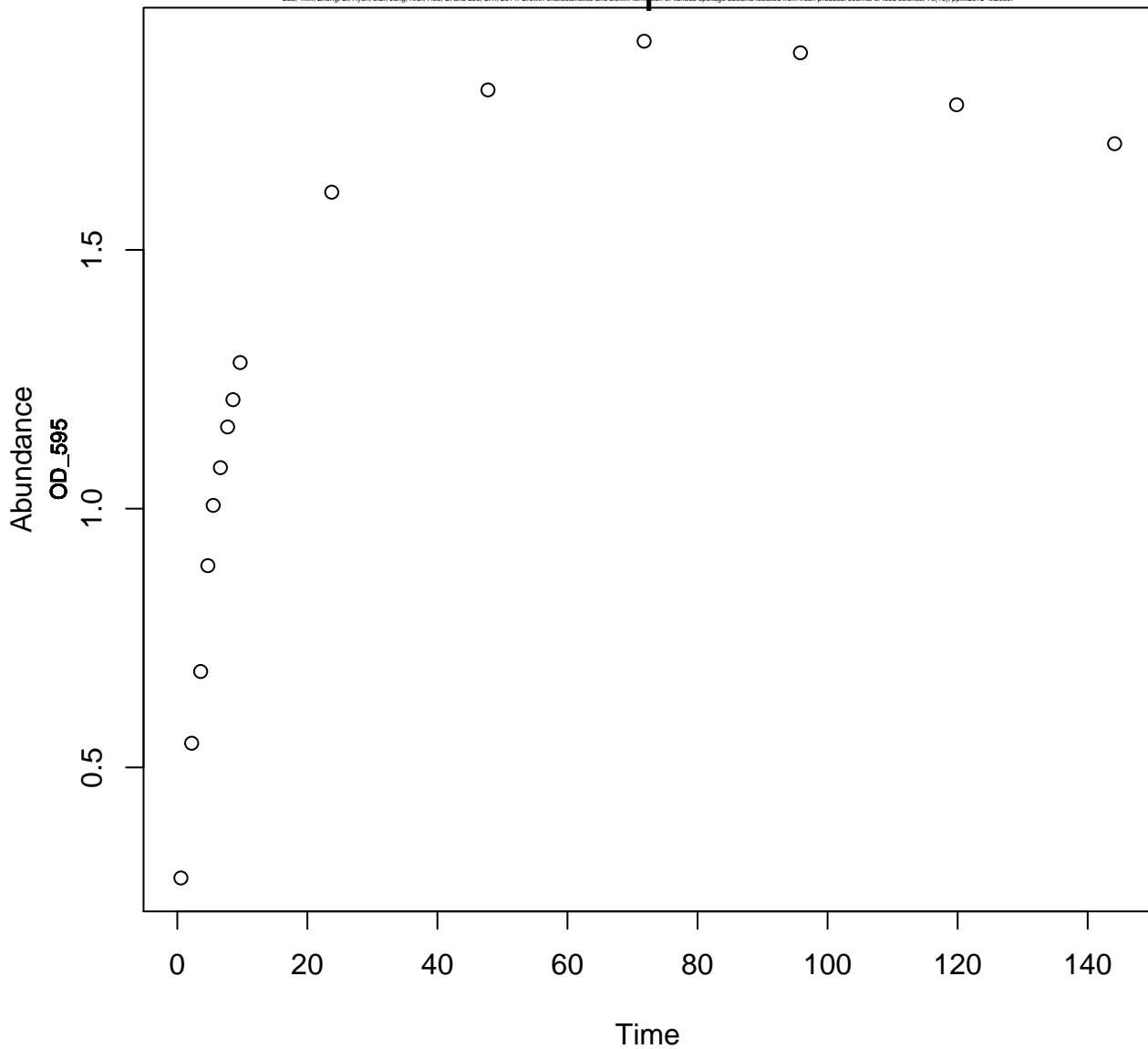
# Clavibacter.michiganensis

TSB

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



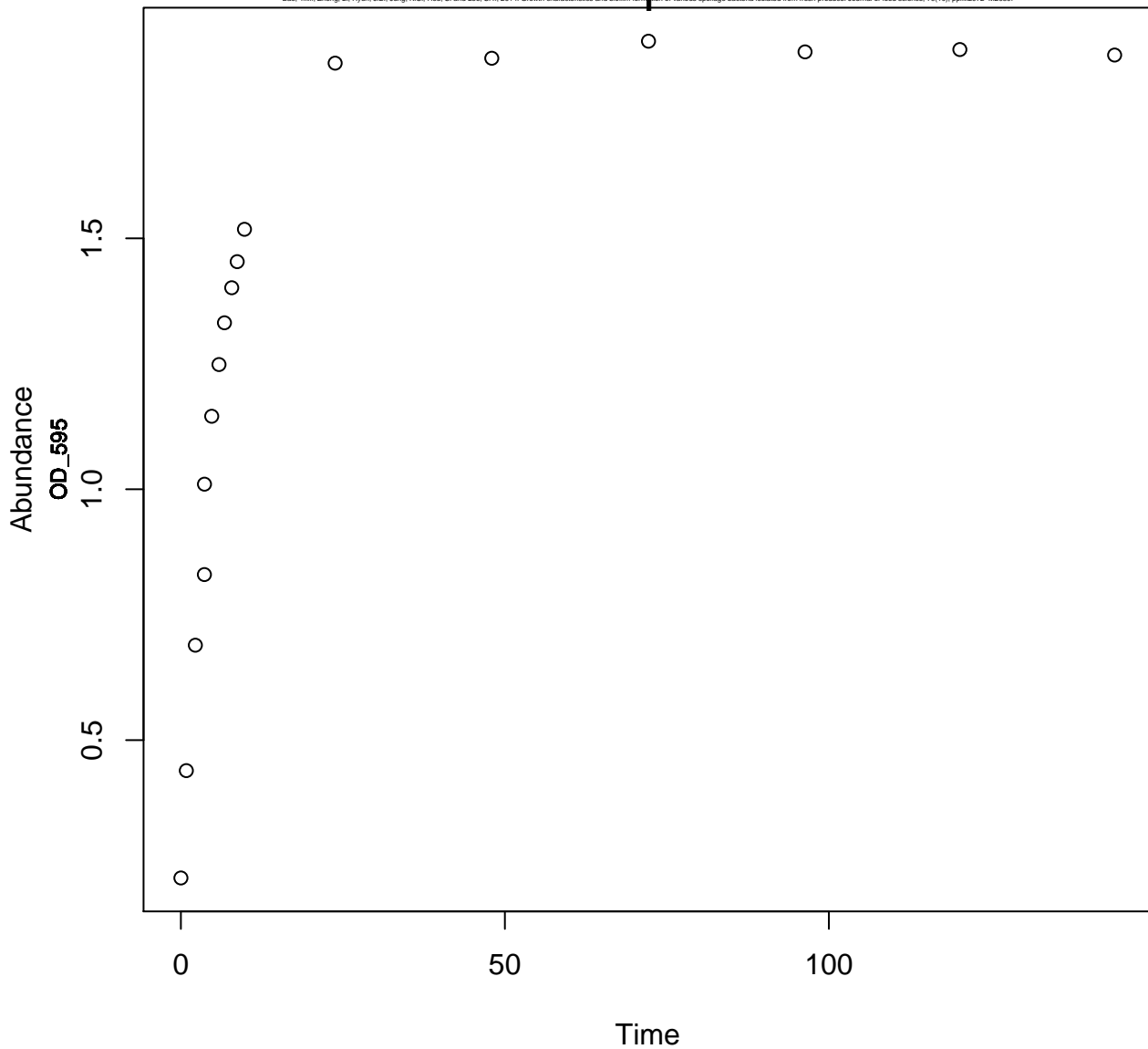
# Clavibacter.michiganensis

TSB

35

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





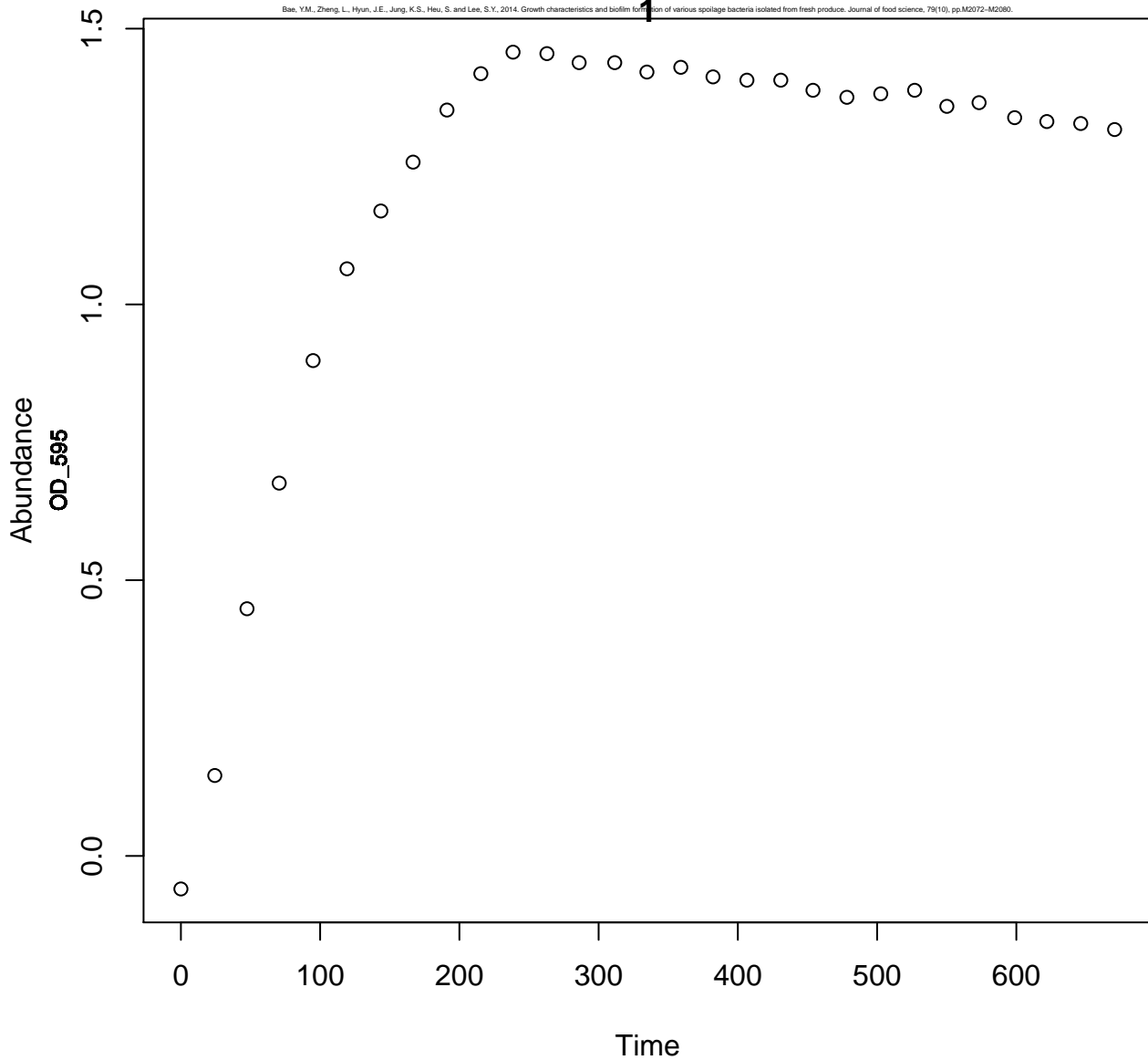
# Pseudomonas.fluorescens.1

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



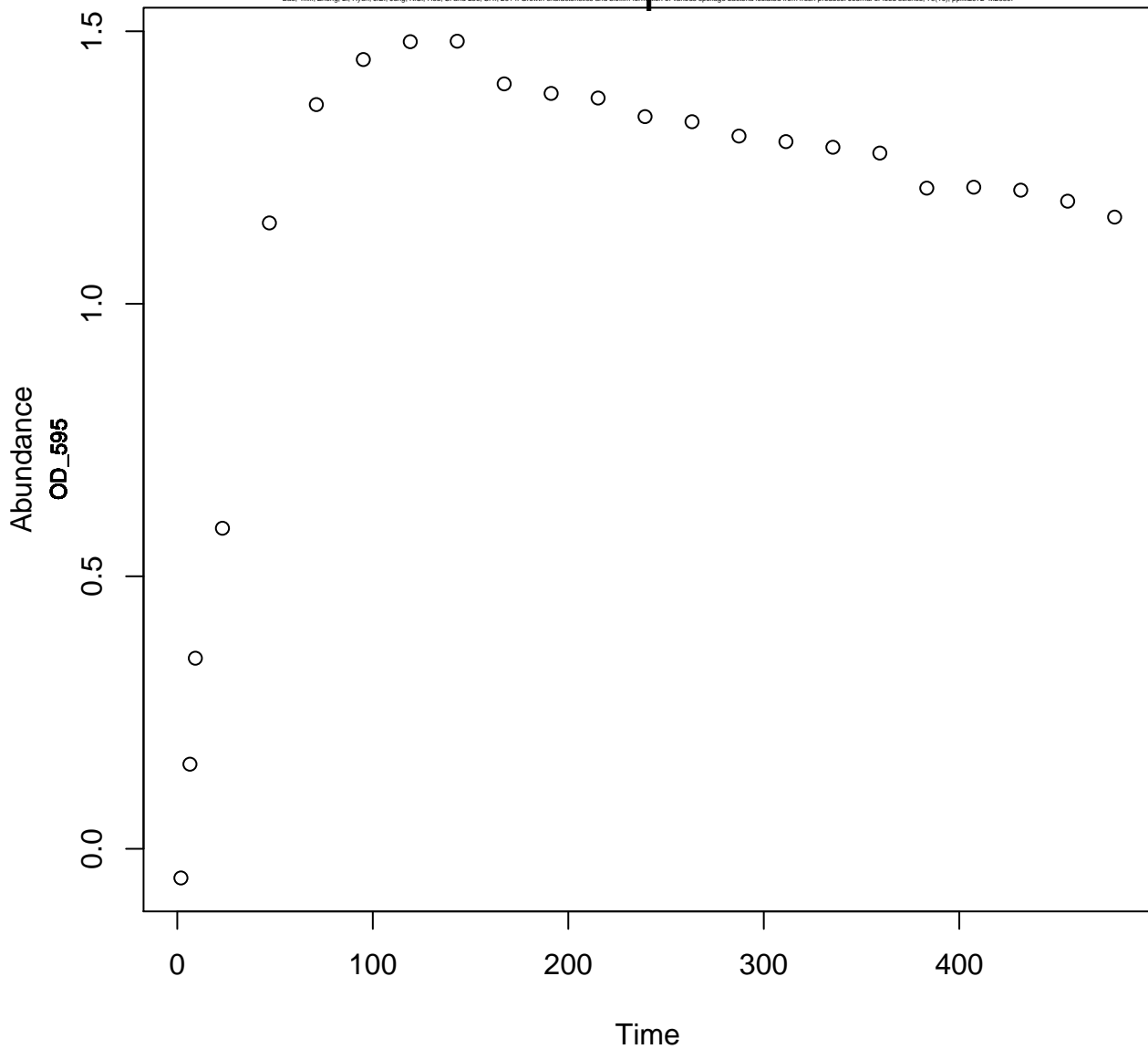
# Pseudomonas.fluorescens.1

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



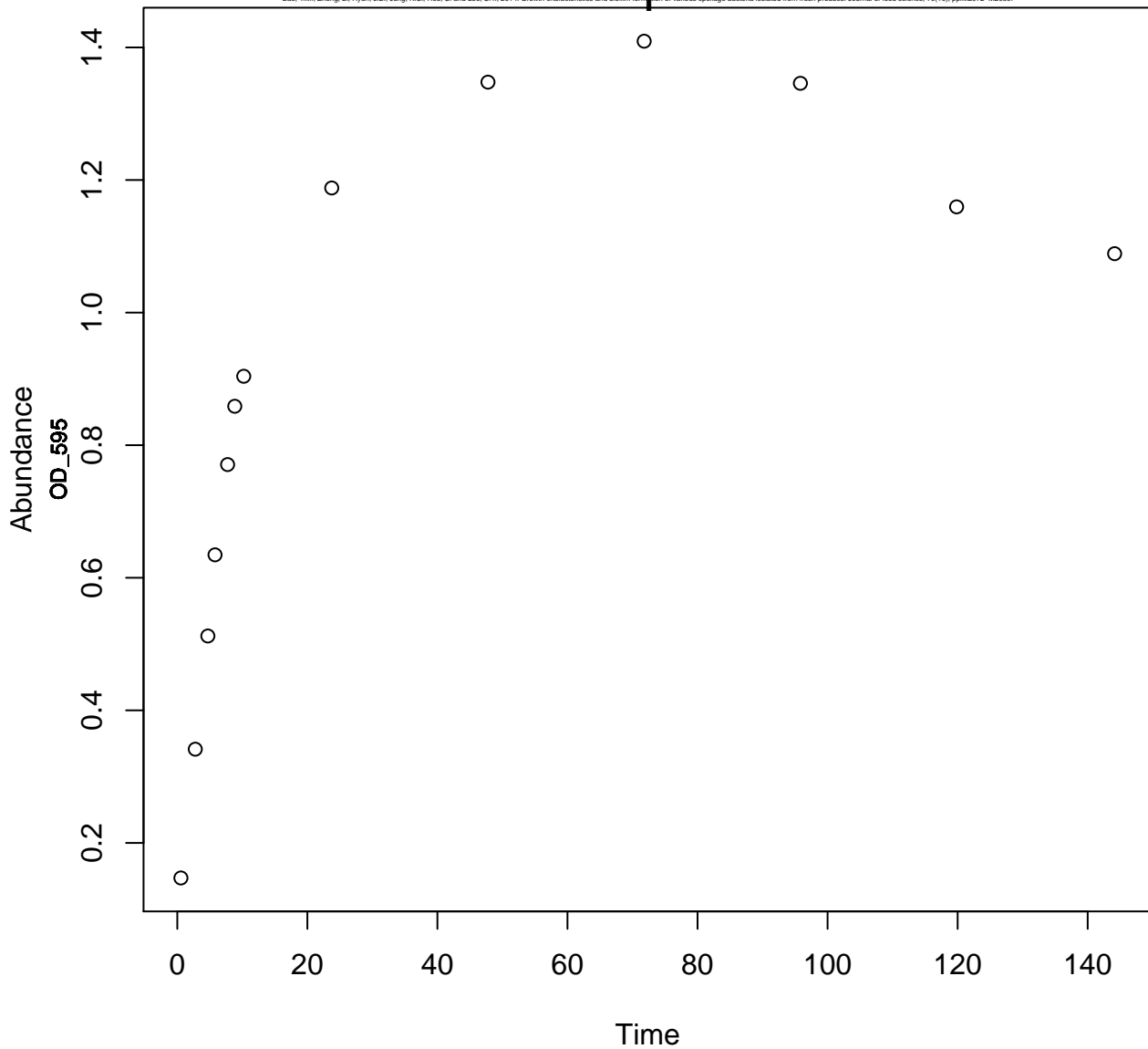
# Pseudomonas.fluorescens.1

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



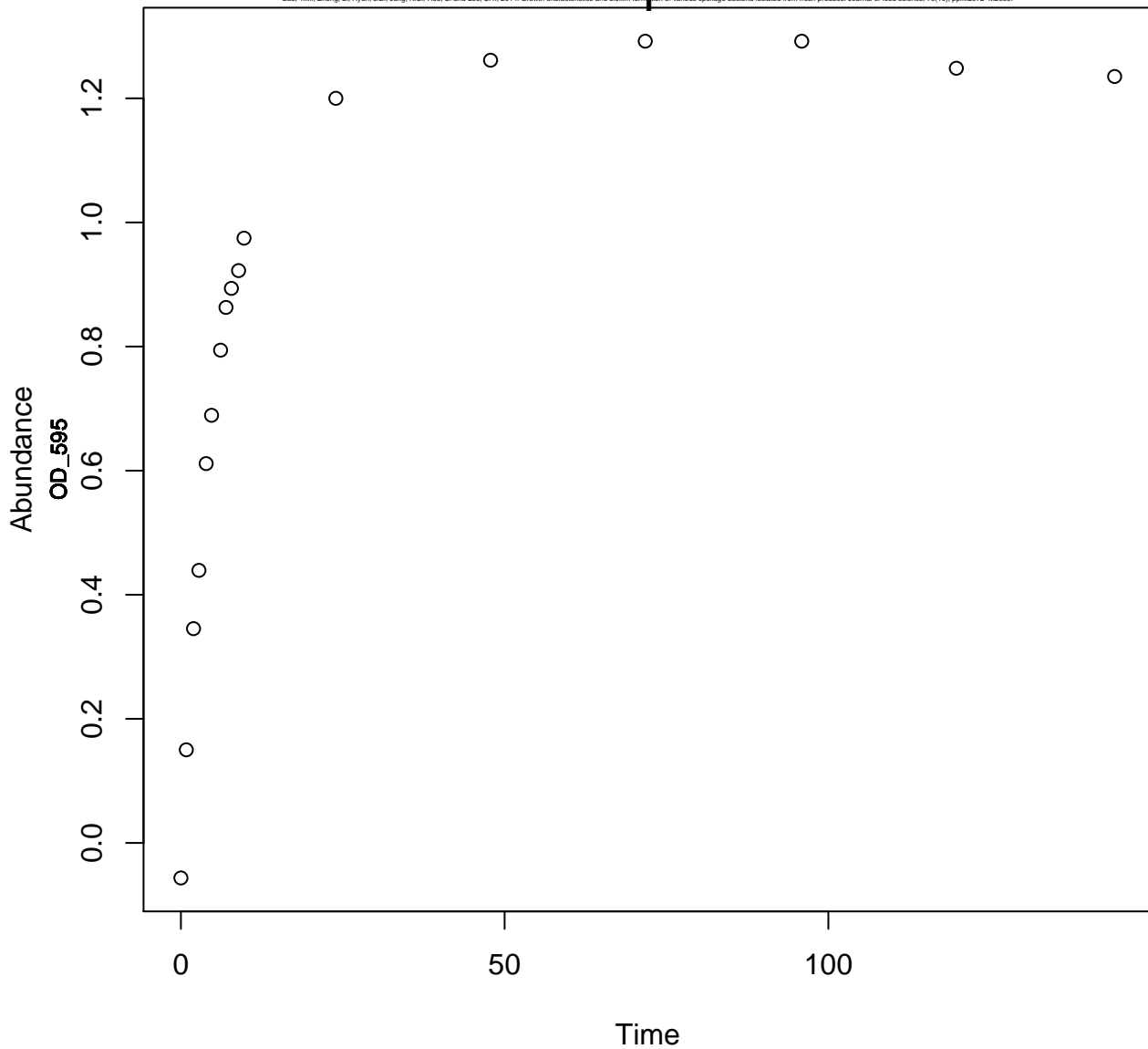
# Pseudomonas.fluorescens.1

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



# Pseudomonas.fluorescens.2

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

Abundance

OD<sub>595</sub>

1.2  
1.0  
0.8  
0.6  
0.4  
0.2  
0.0  
-0.2

0

100

200

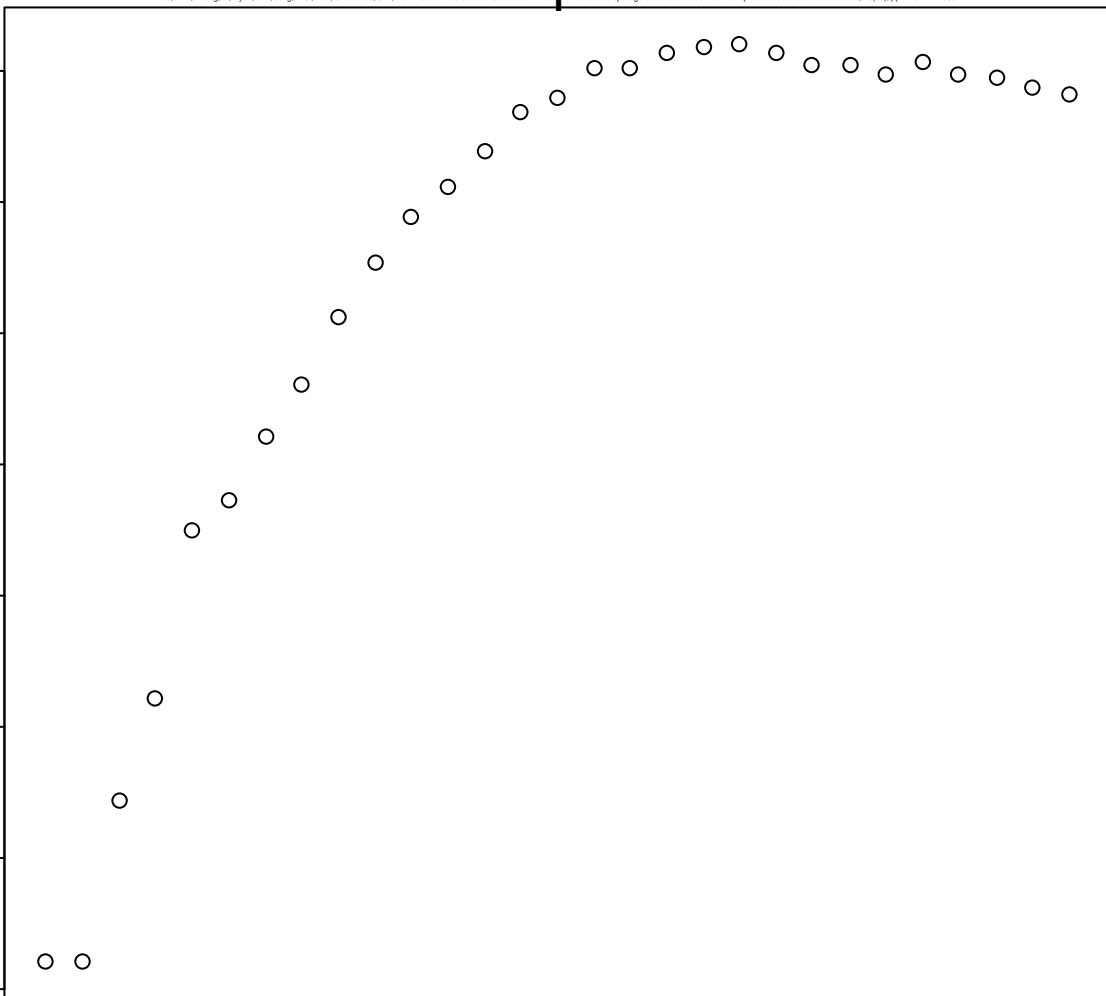
300

400

500

600

Time



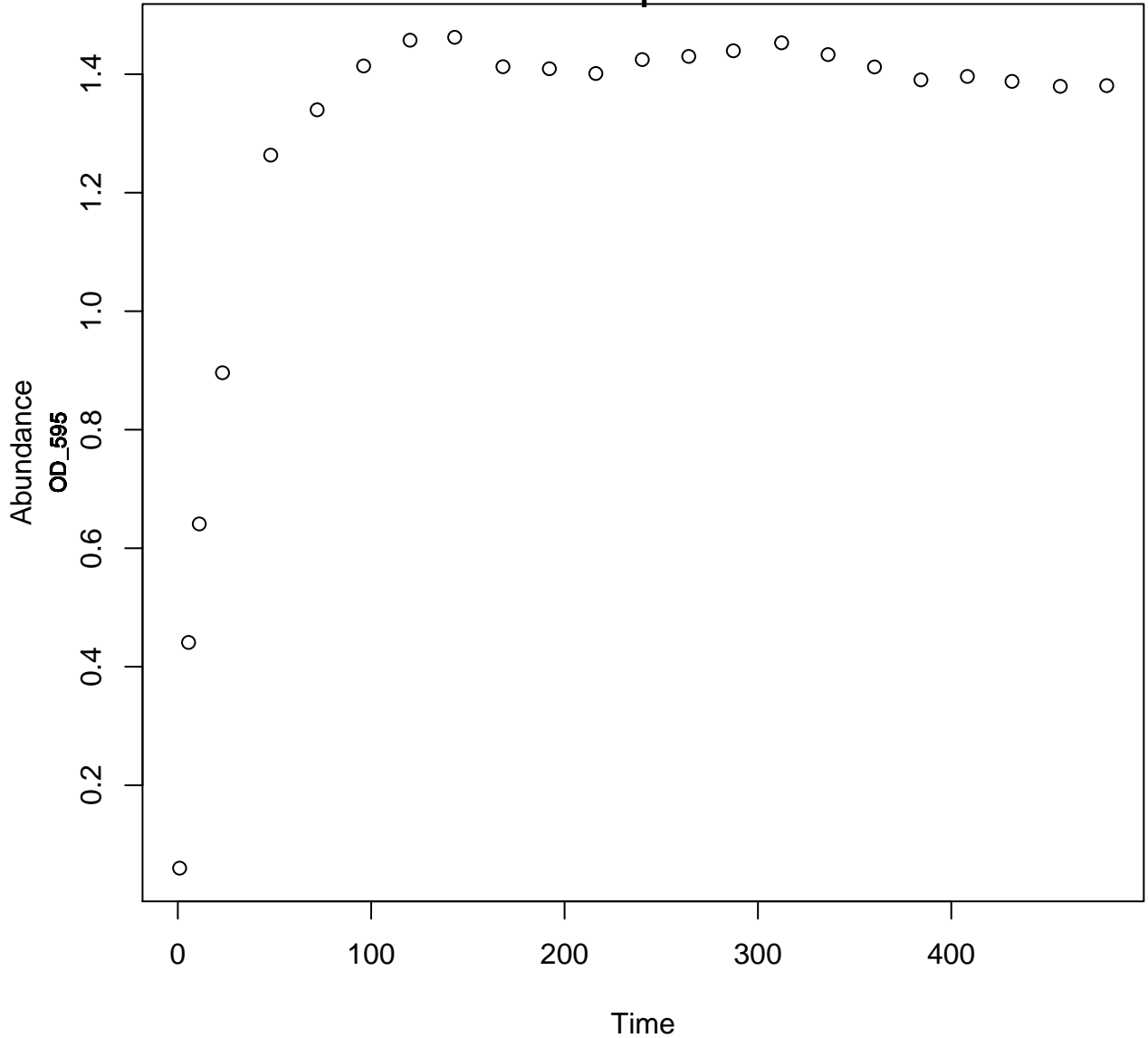
# Pseudomonas.fluorescens.2

TSB

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1

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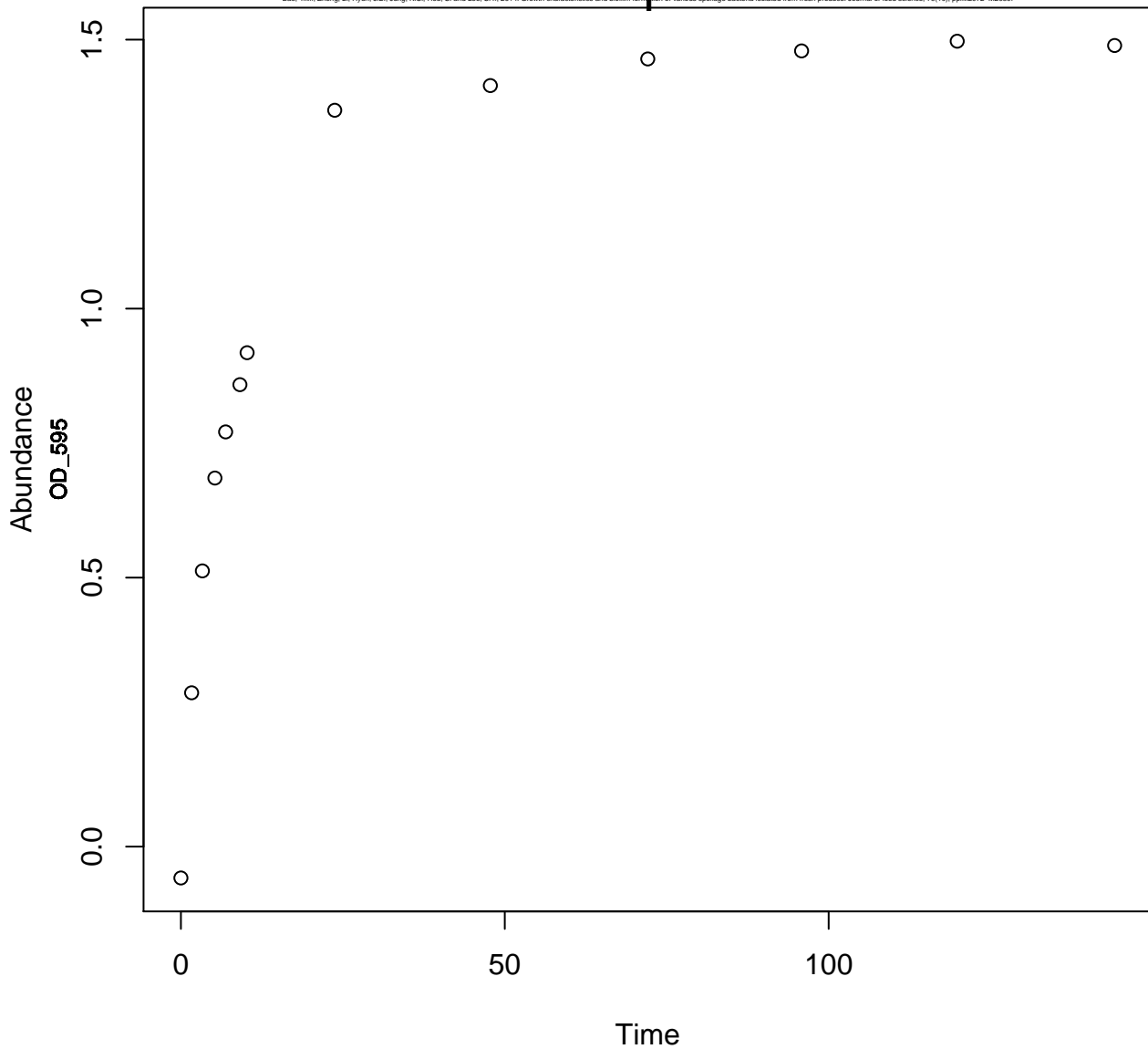
# Pseudomonas.fluorescens.2

TSB

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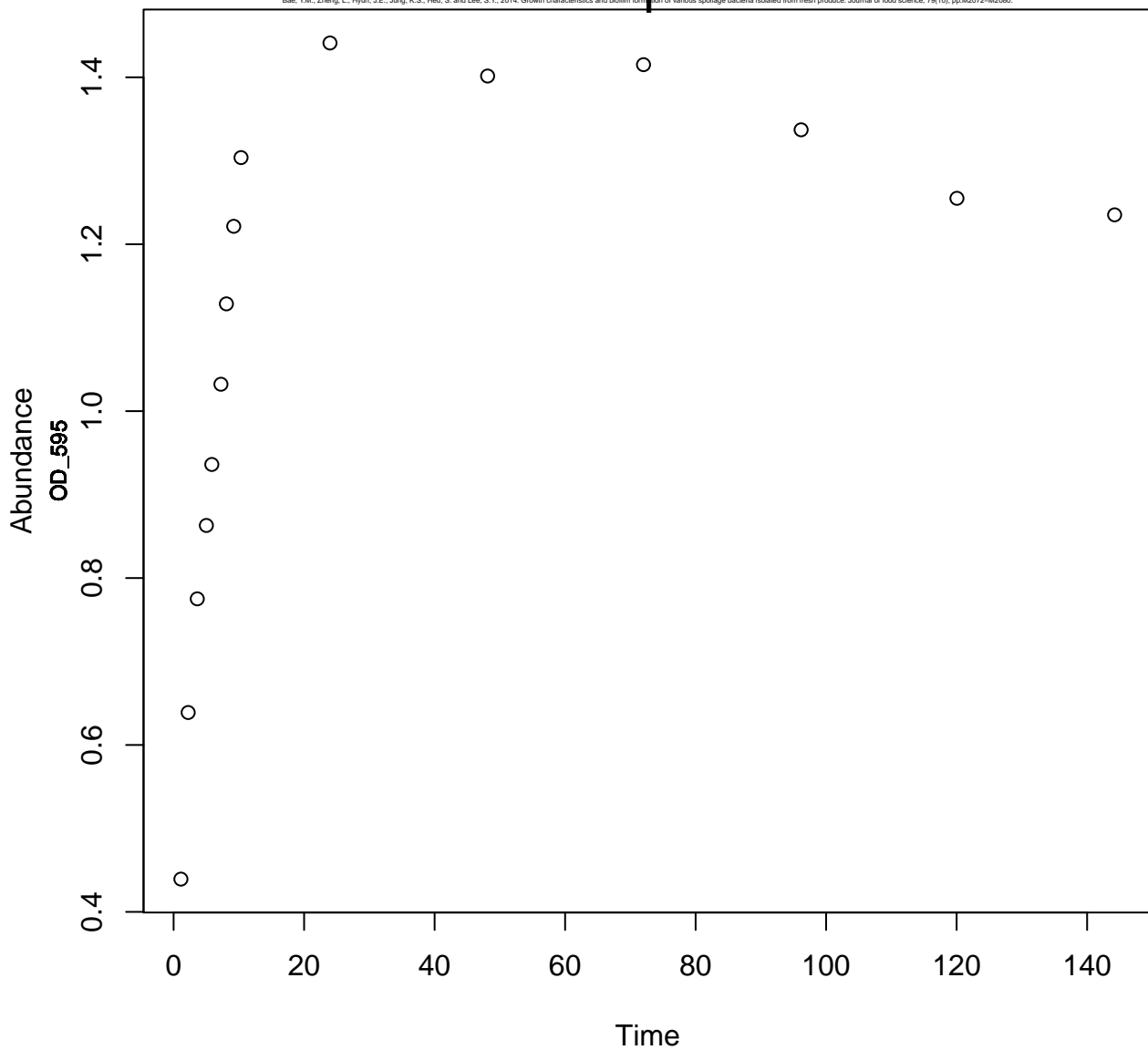
# Pseudomonas.fluorescens.2

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





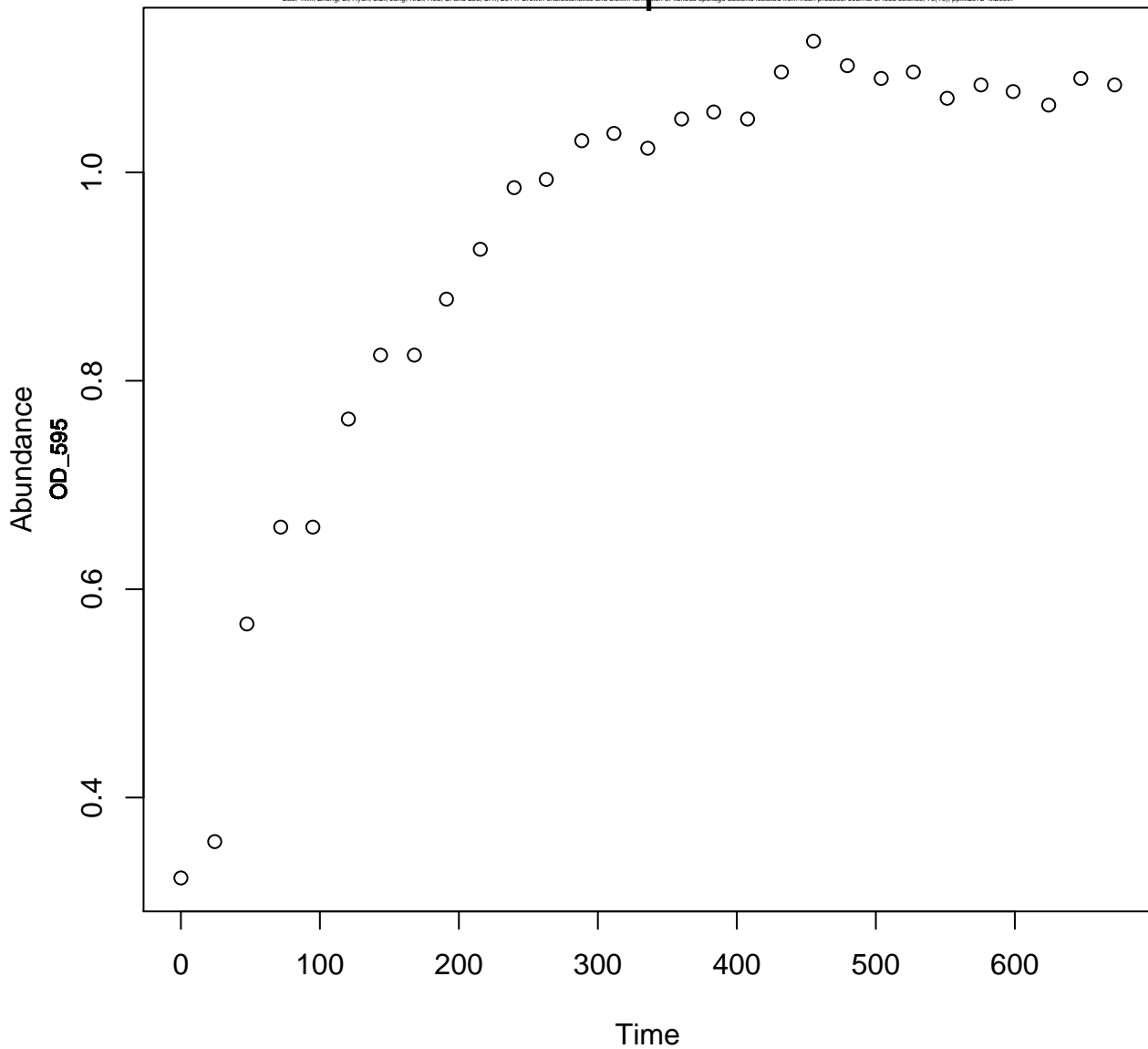
# Acinetobacter.clacoaceticus.1

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



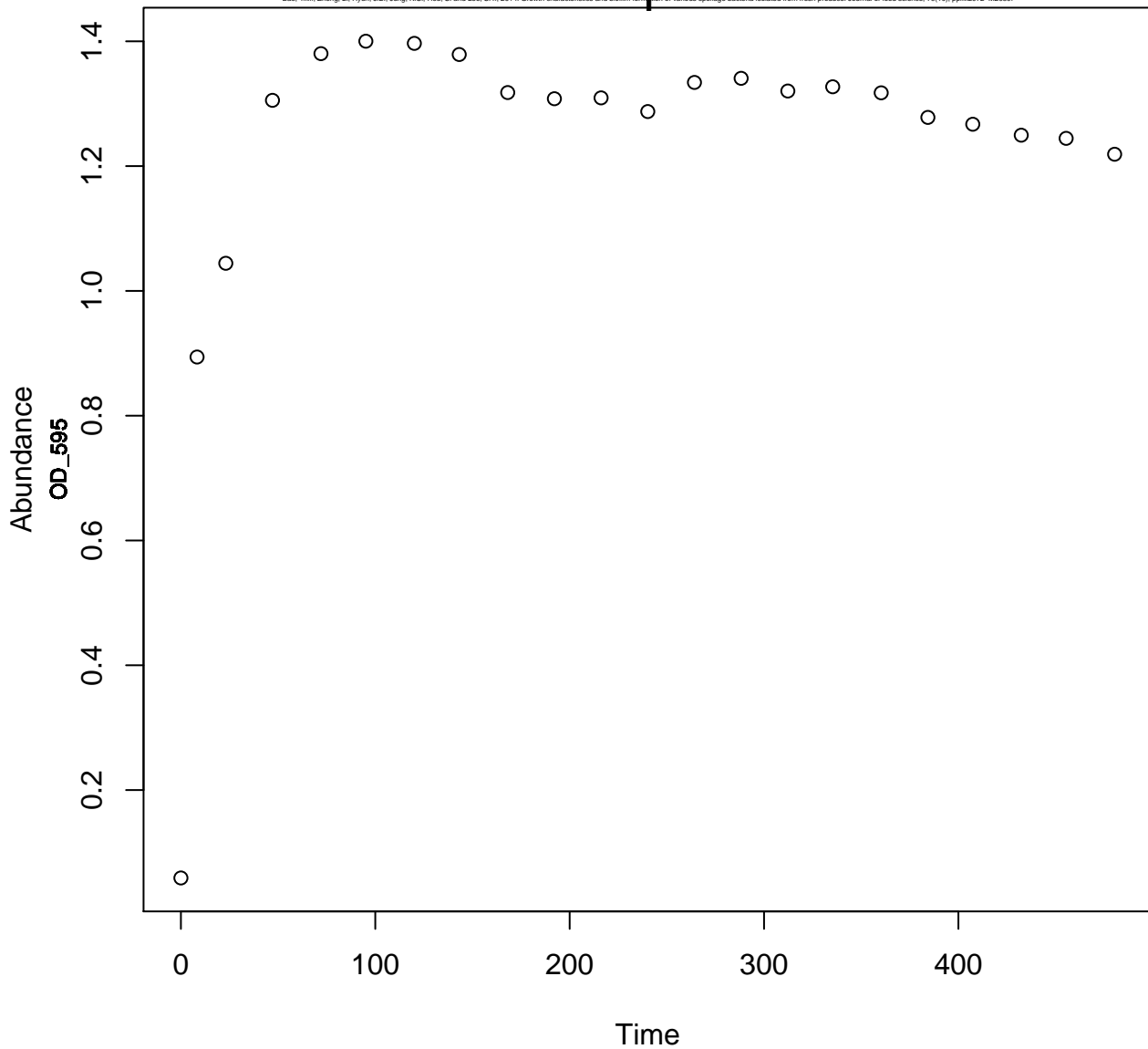
# Acinetobacter.clacoaceticus.1

TSB

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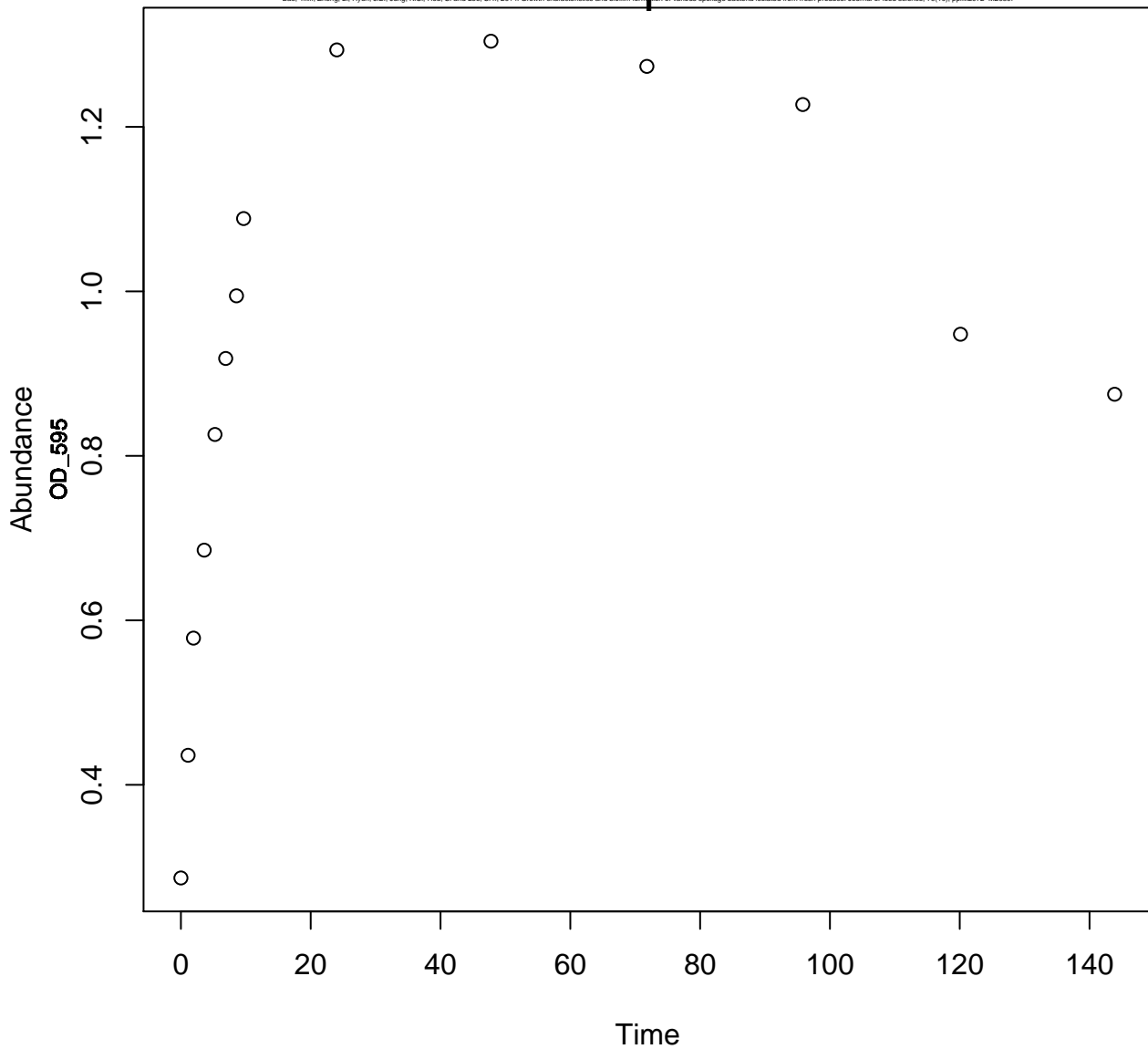
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TSB

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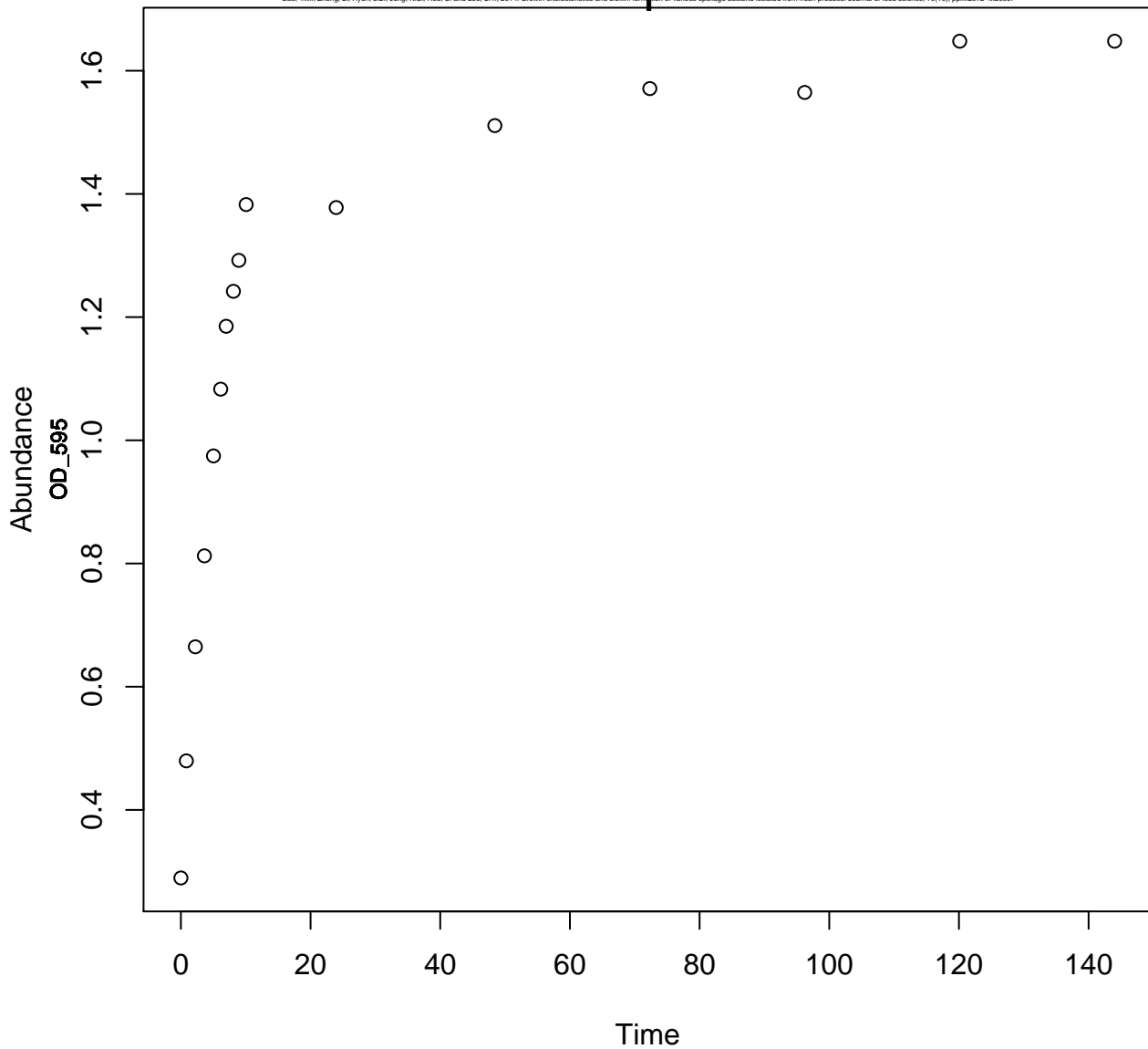
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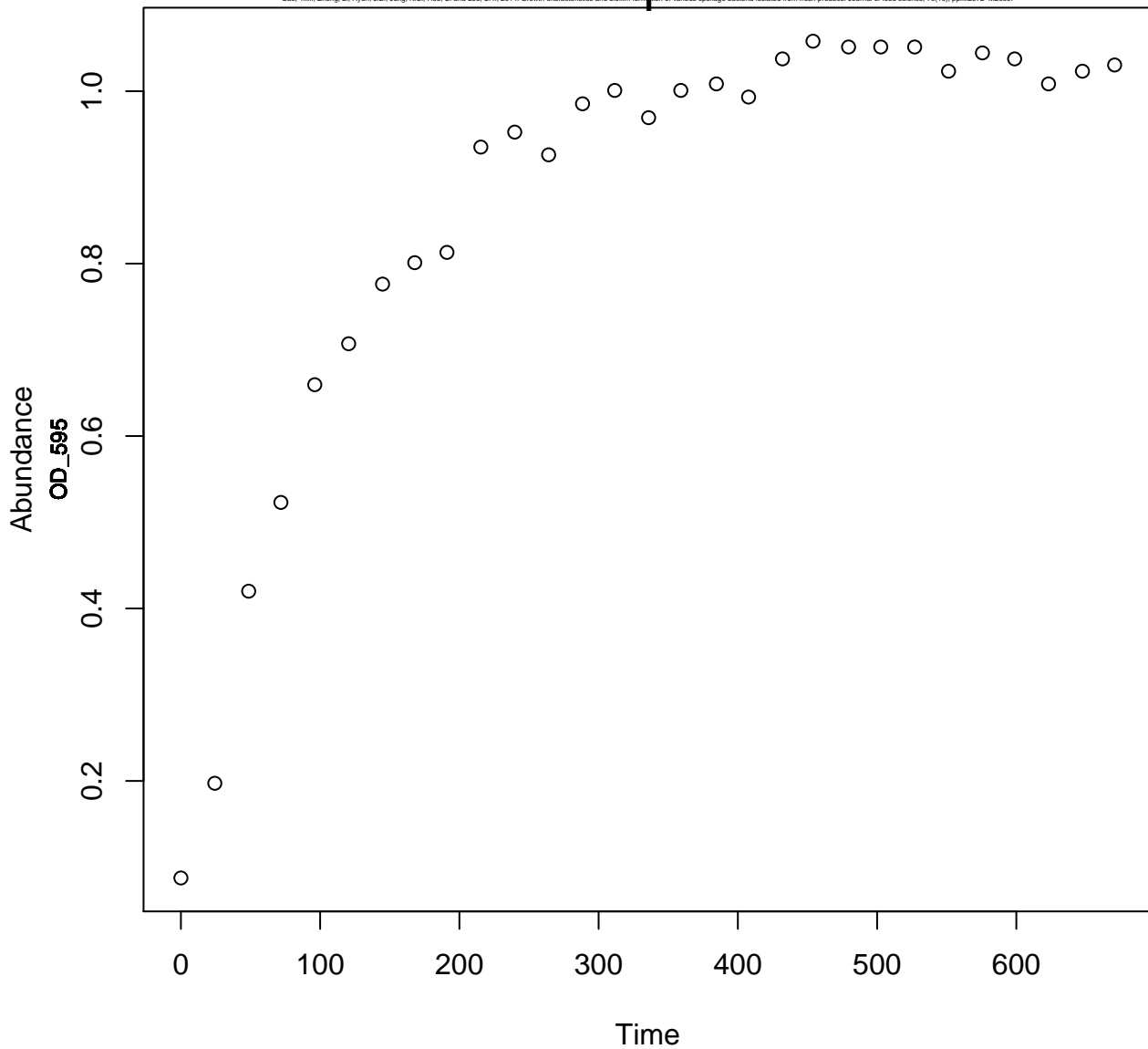
# Acinetobacter.clacoaceticus.2

TSB

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Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



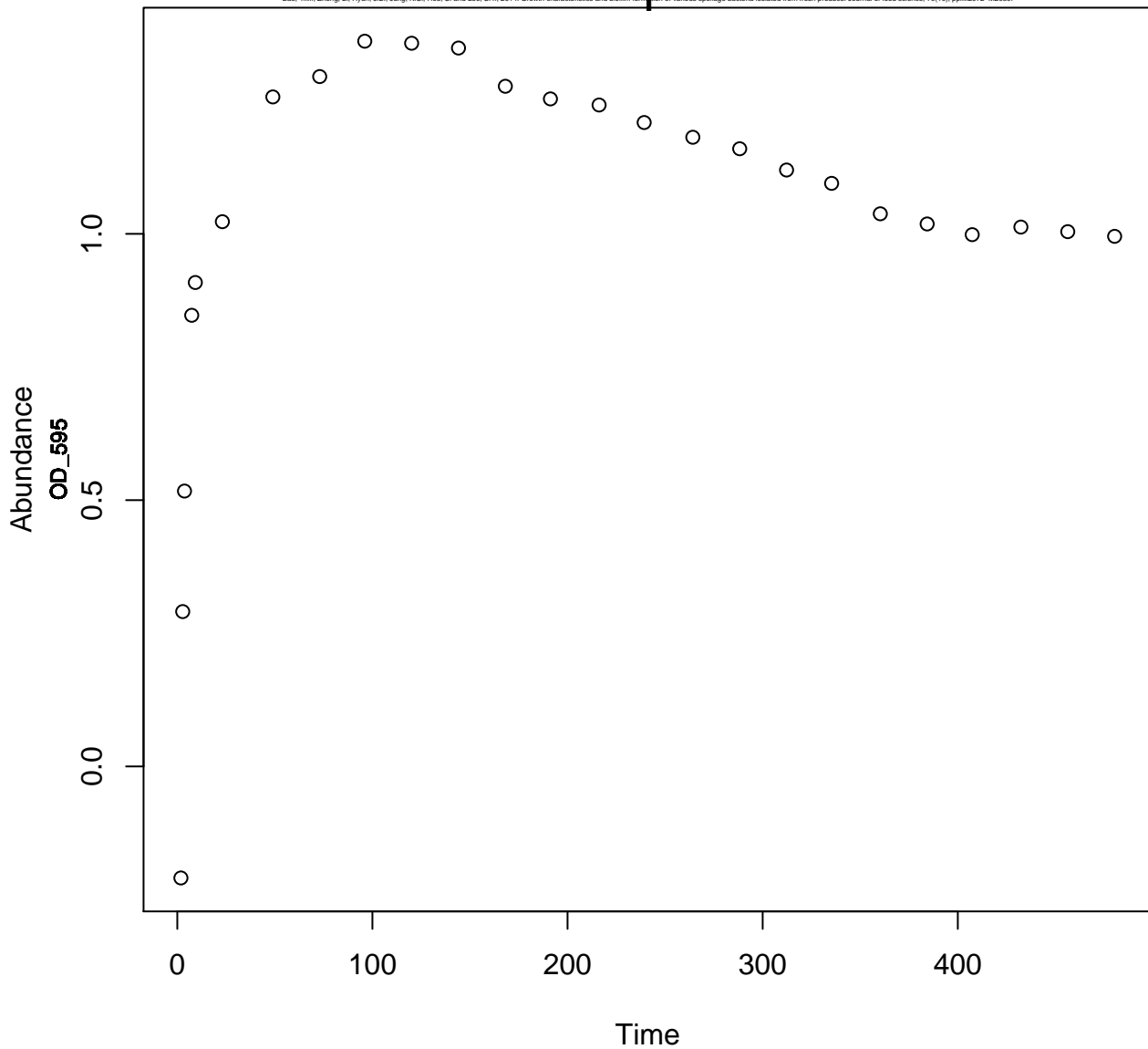
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TSB

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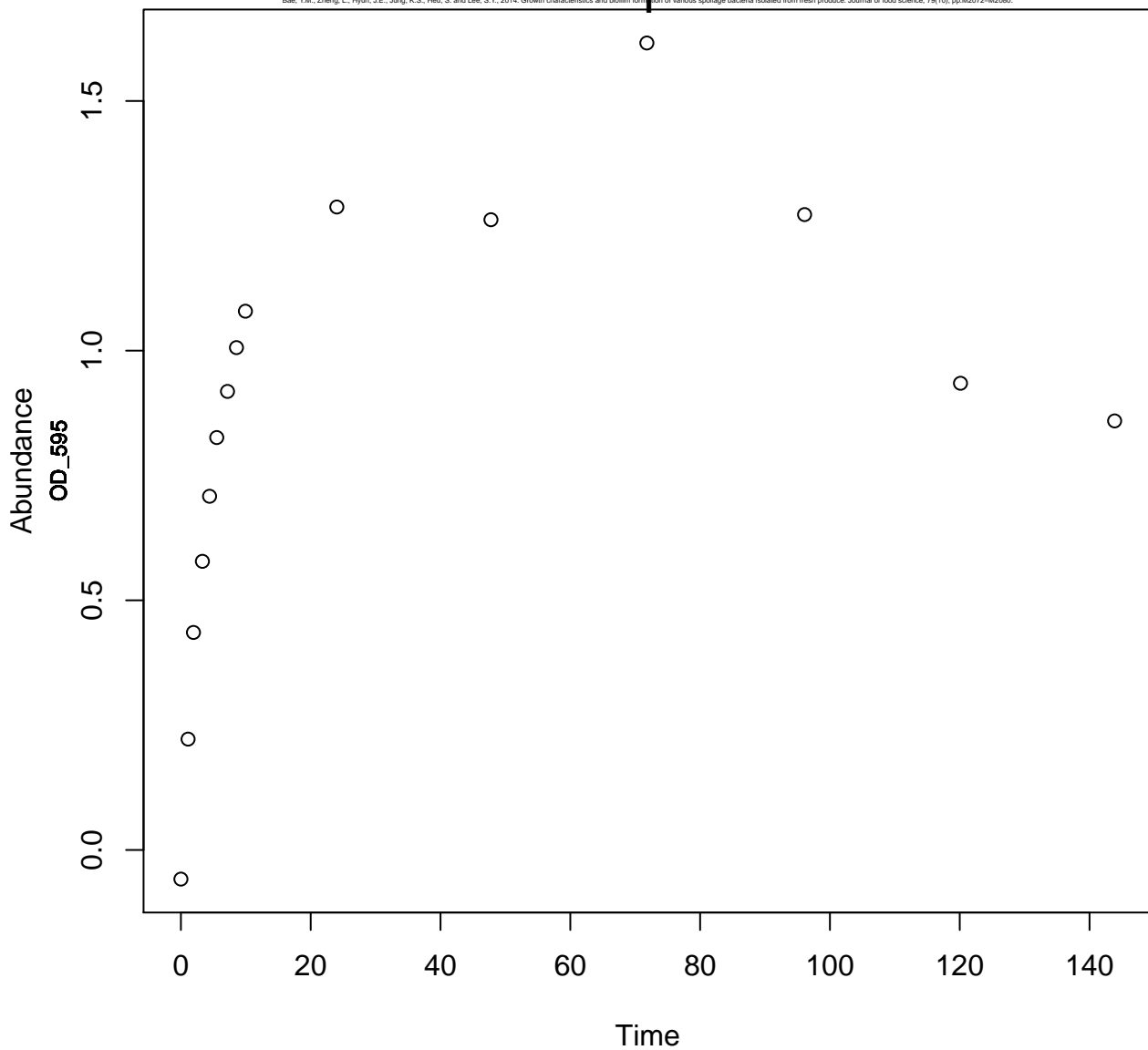
# Acinetobacter.clacoaceticus.2

TSB

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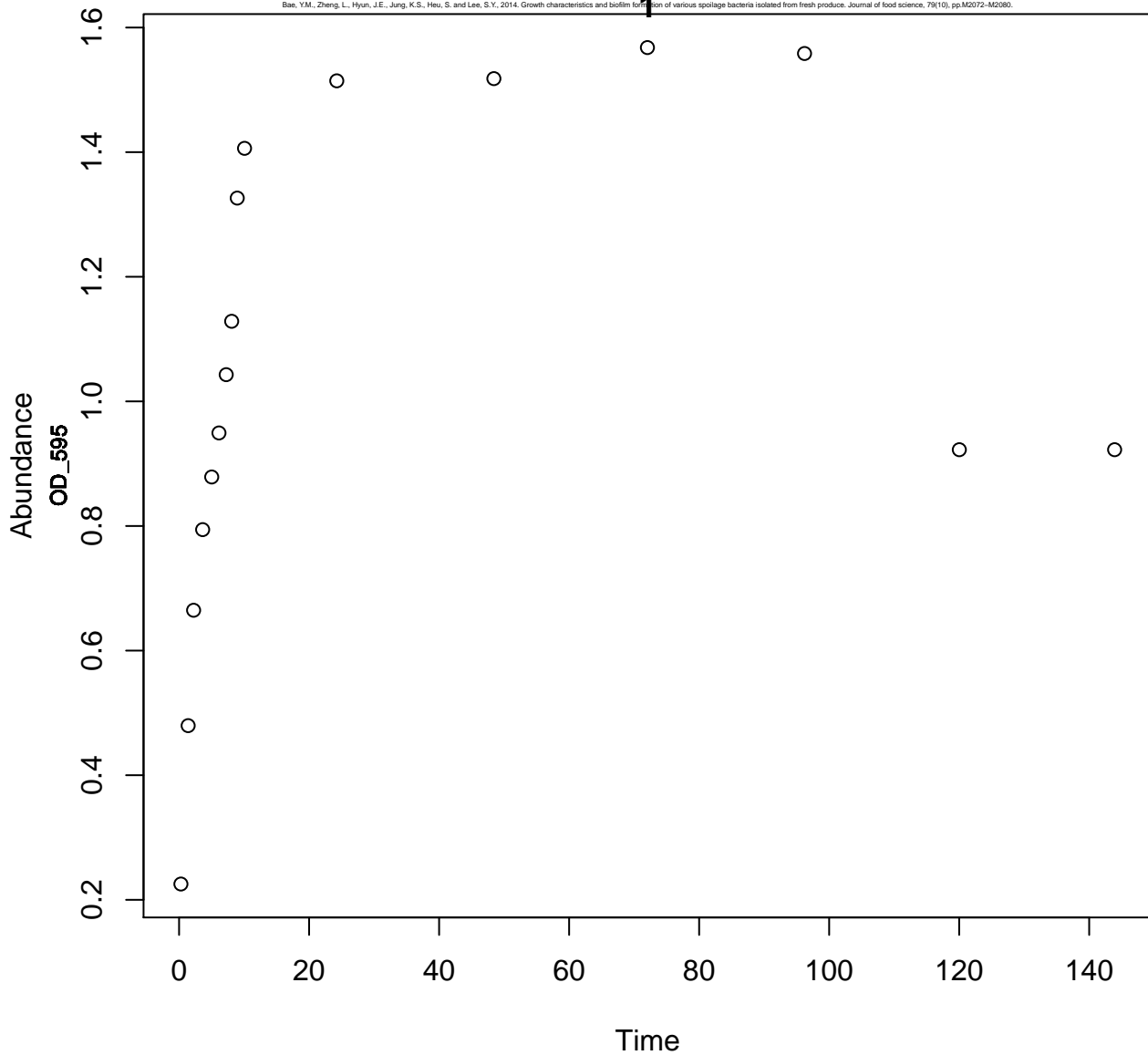
# Acinetobacter.clacoaceticus.2

TSB

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1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





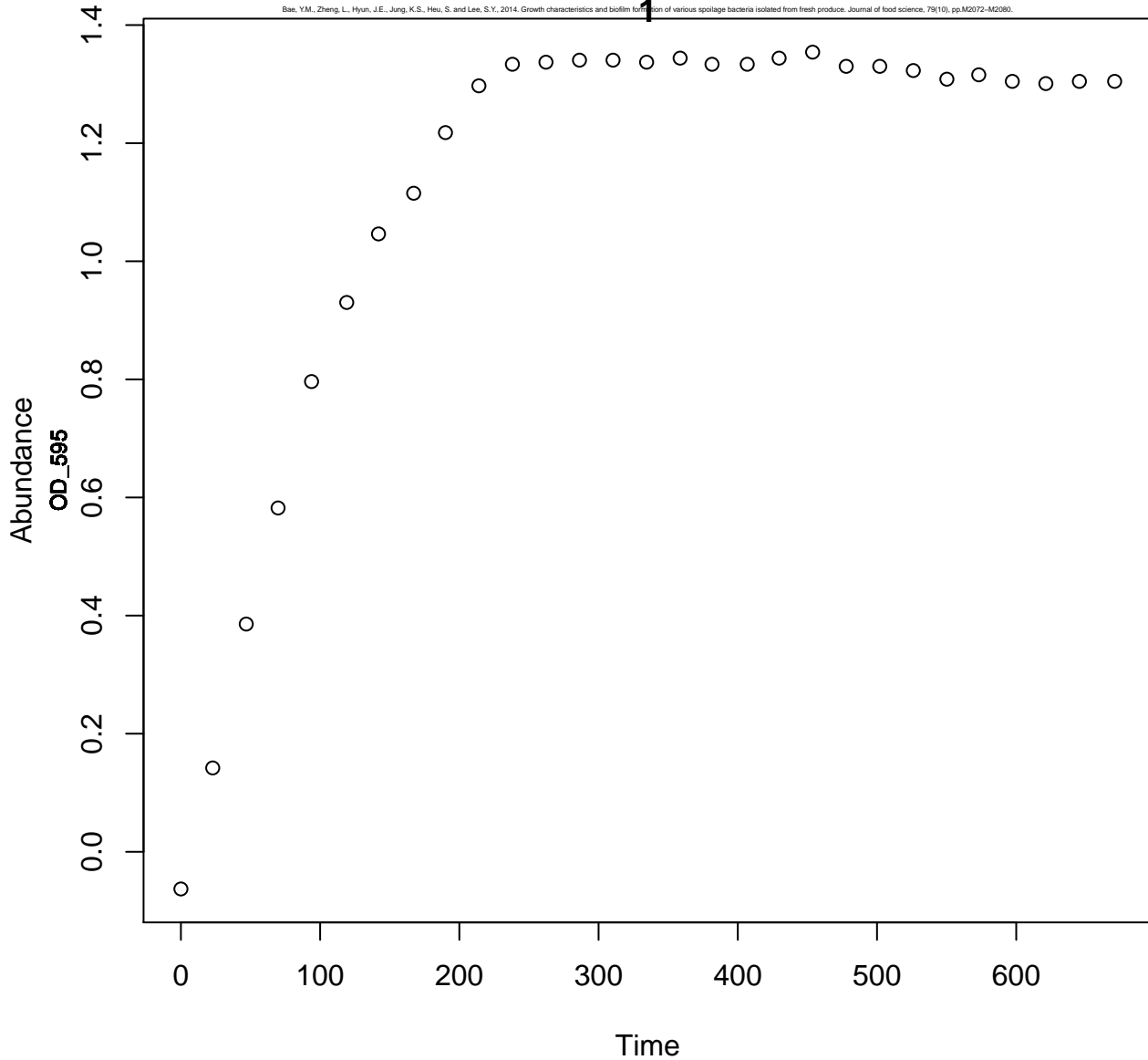
# Stenotrophomonas.maltophilia.1

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



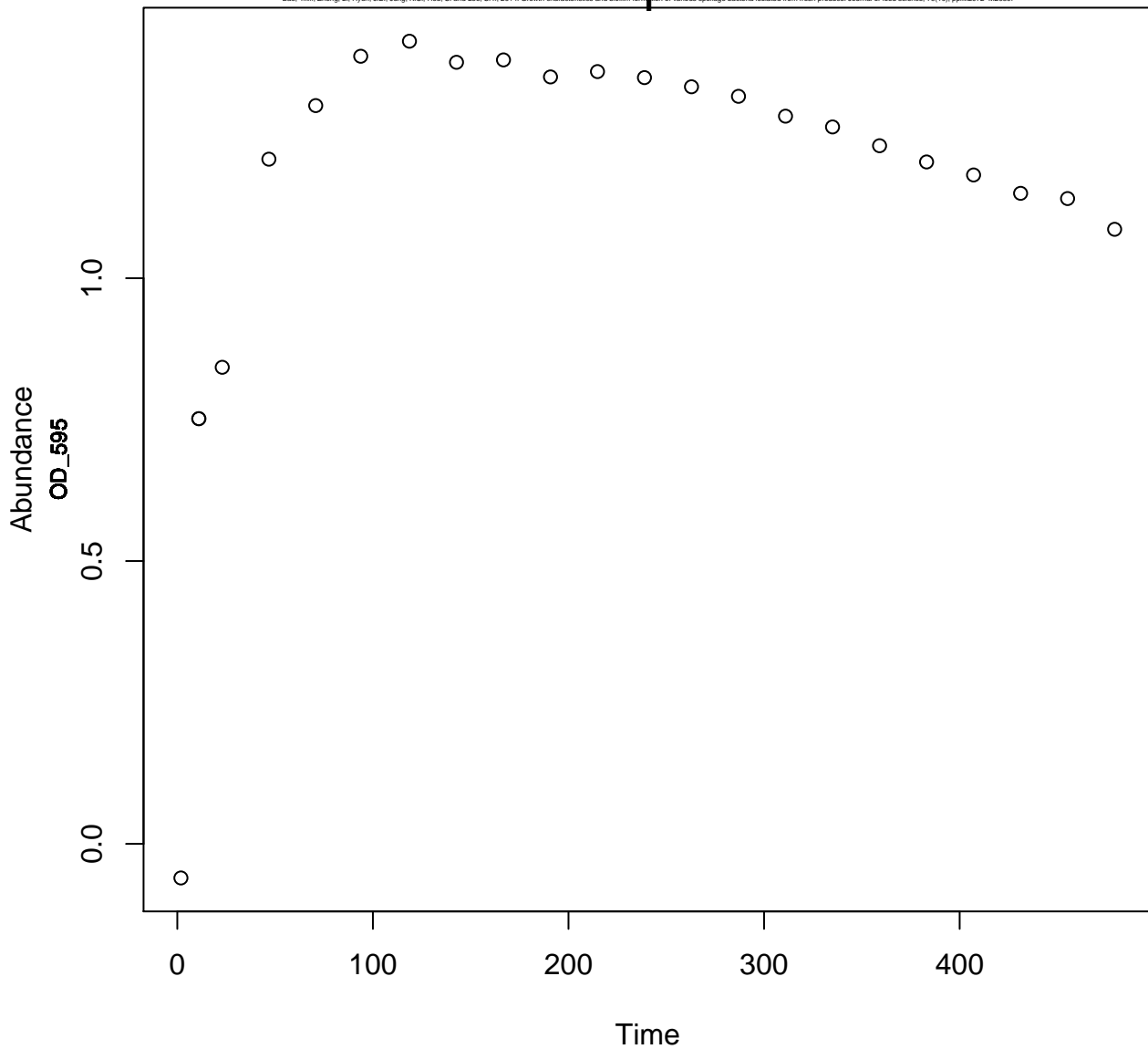
# Stenotrophomonas.maltophilia.1

TSB

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1

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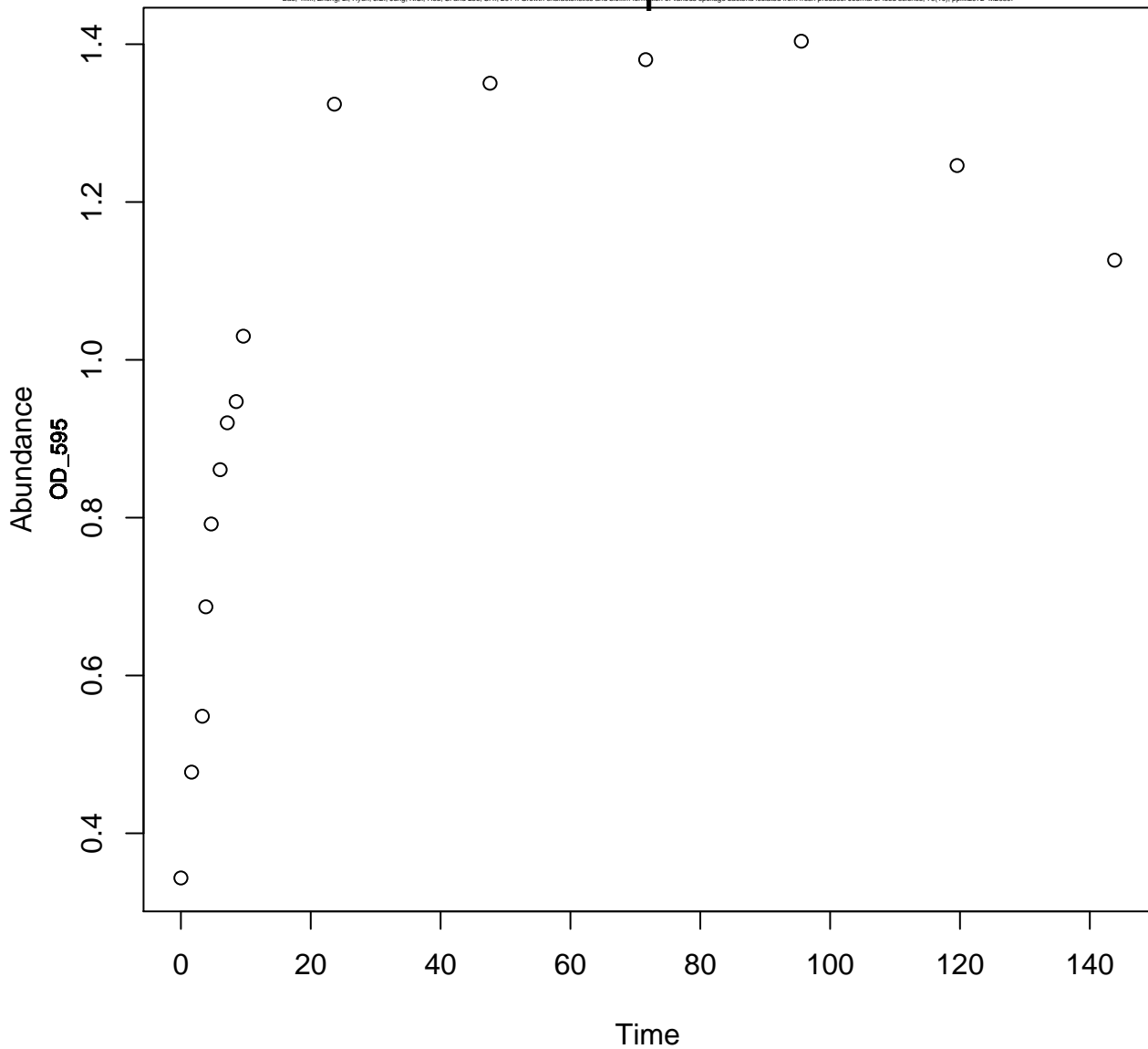
# Stenotrophomonas.maltophilia.1

TSB

25

1

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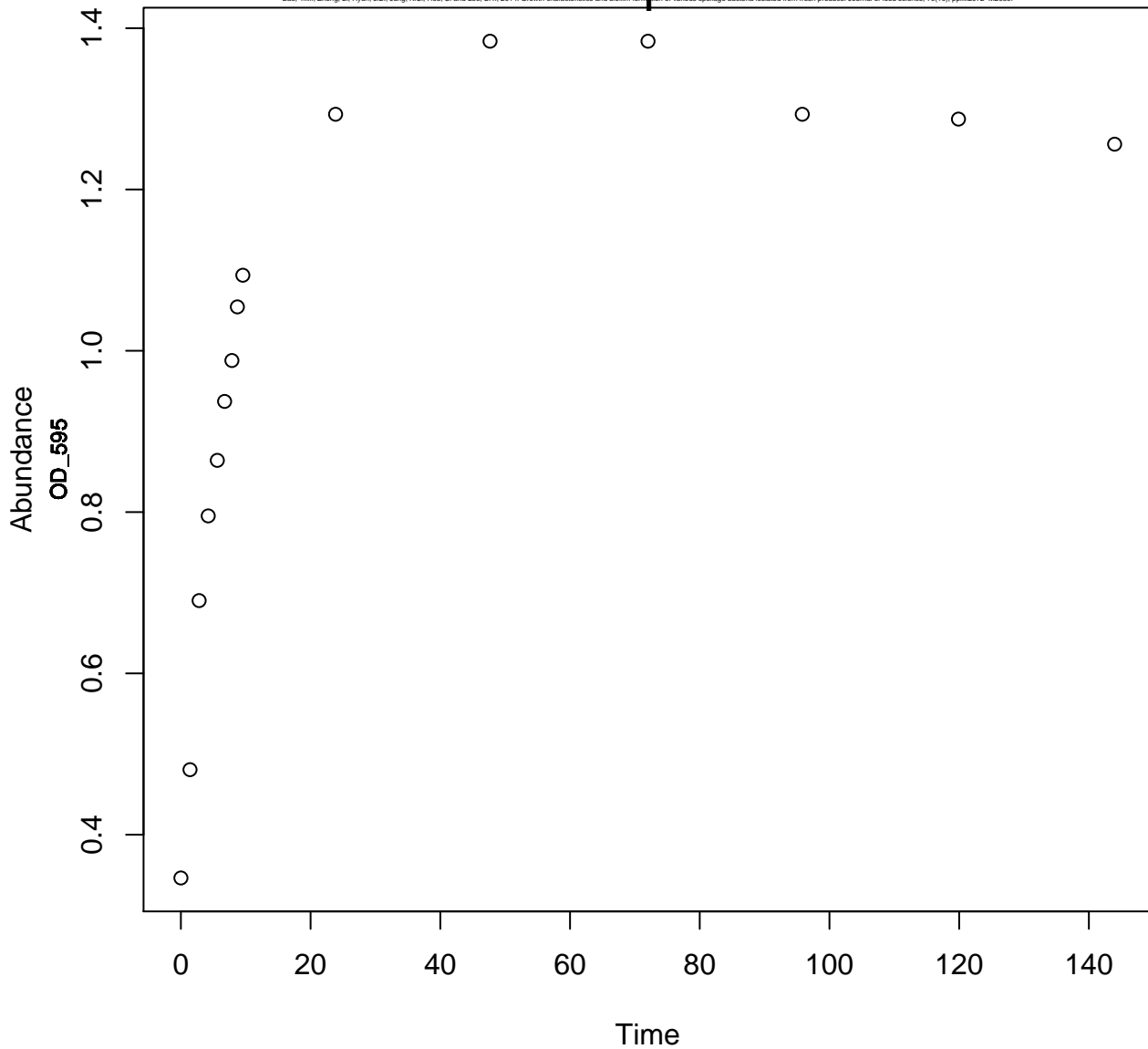
# Stenotrophomonas.maltophilia.1

TSB

35

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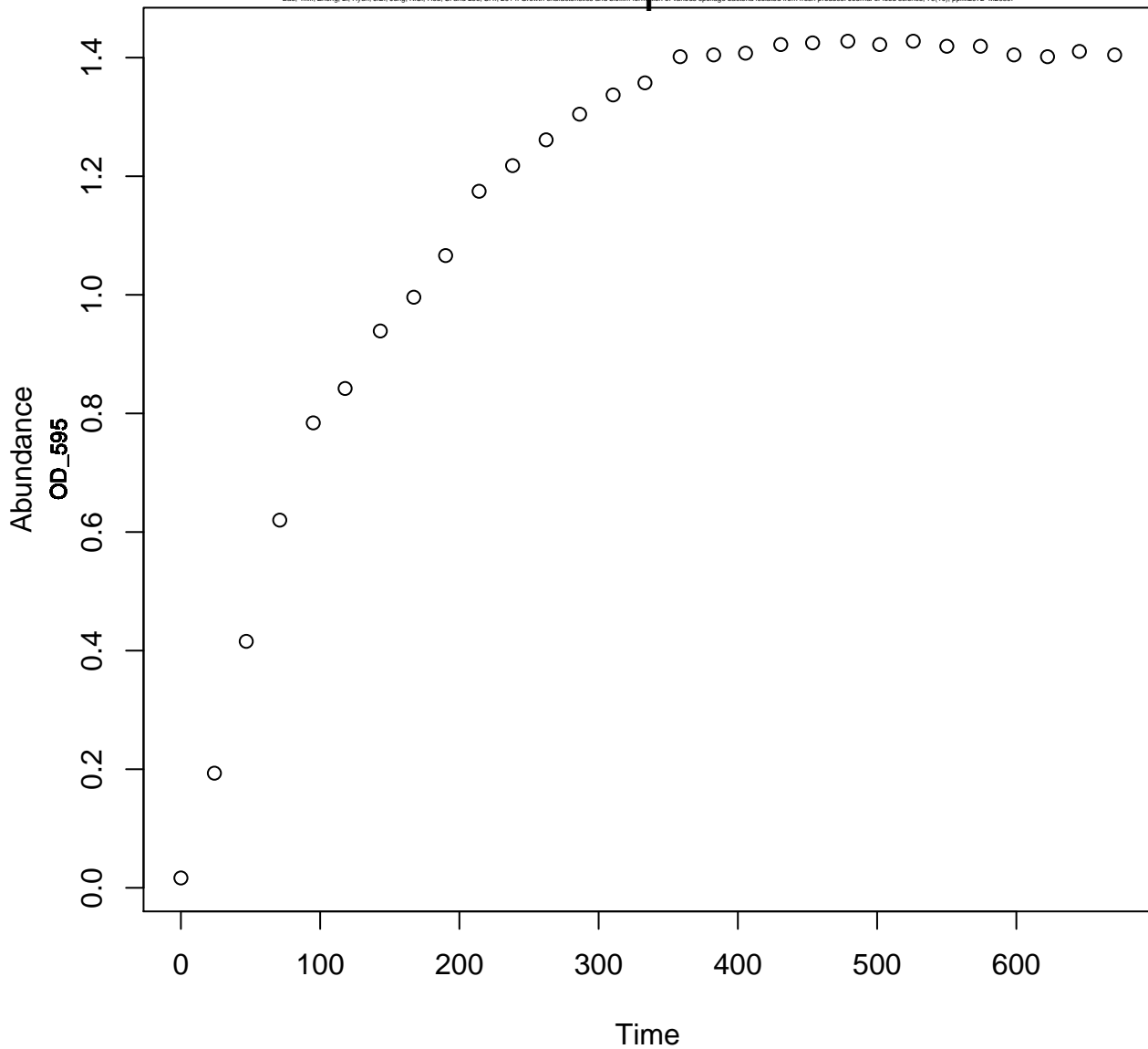
# Stenotrophomonas.maltophilia.2

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



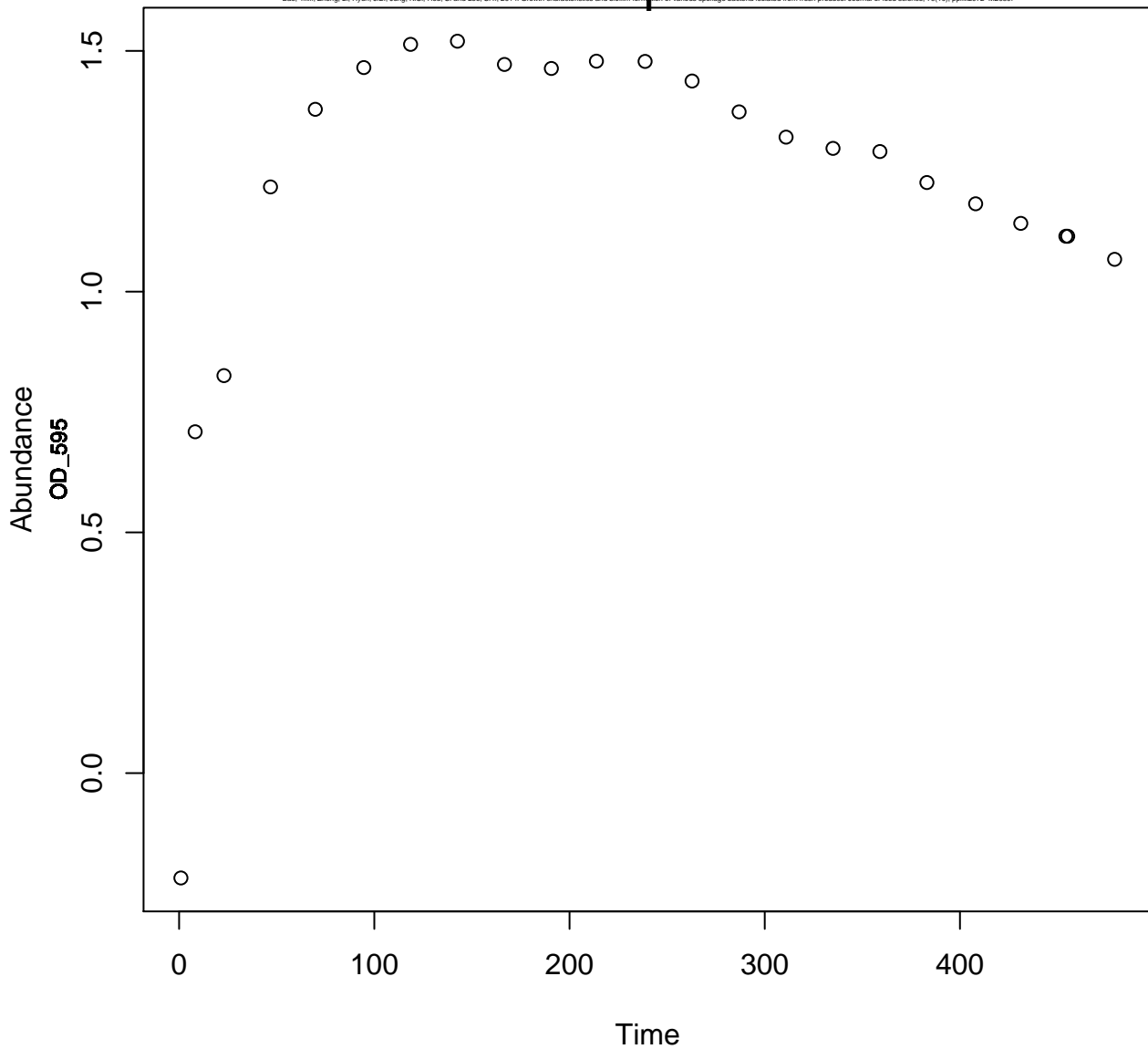
# Stenotrophomonas.maltophilia.2

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



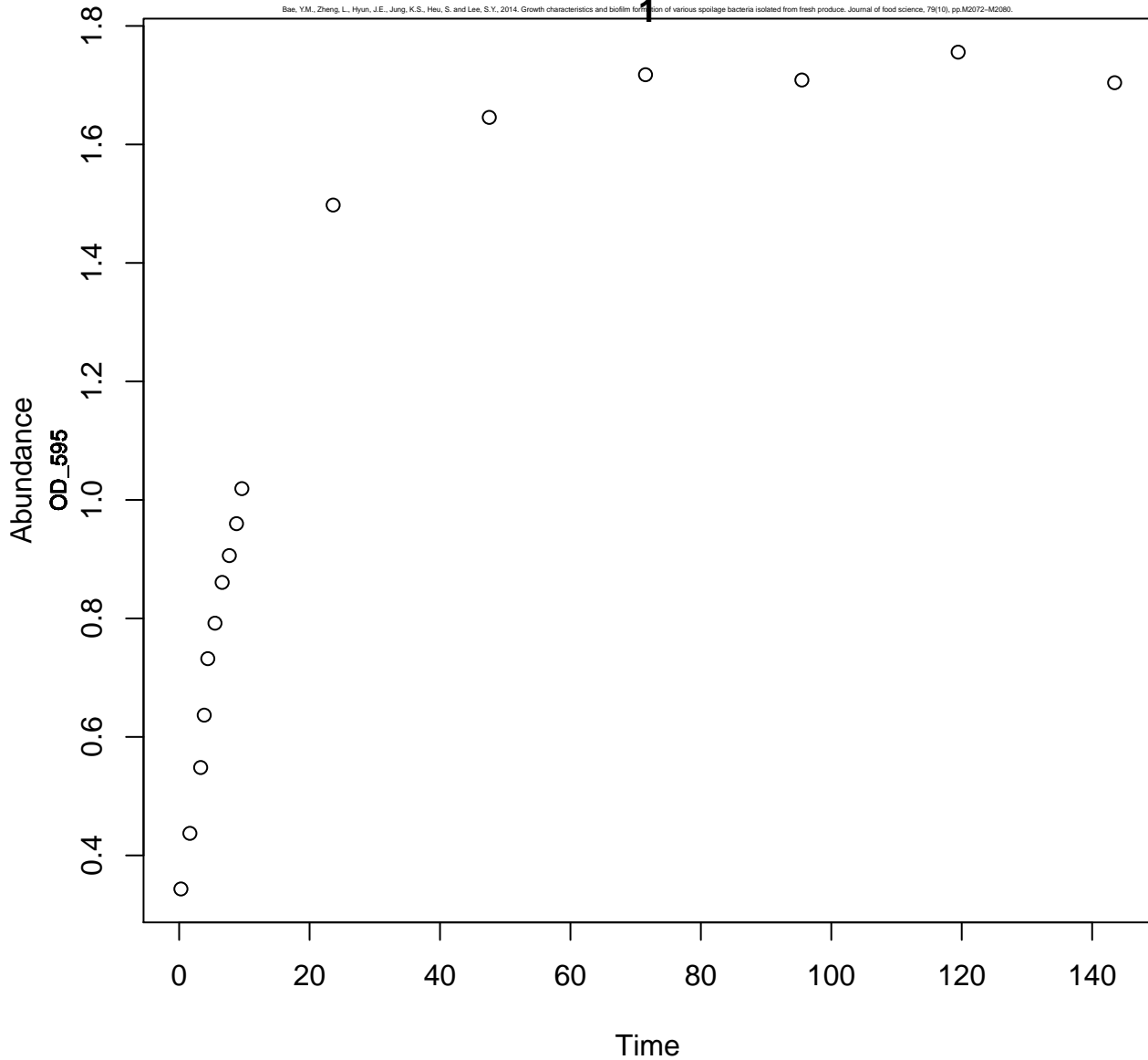
# Stenotrophomonas.maltophilia.2

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



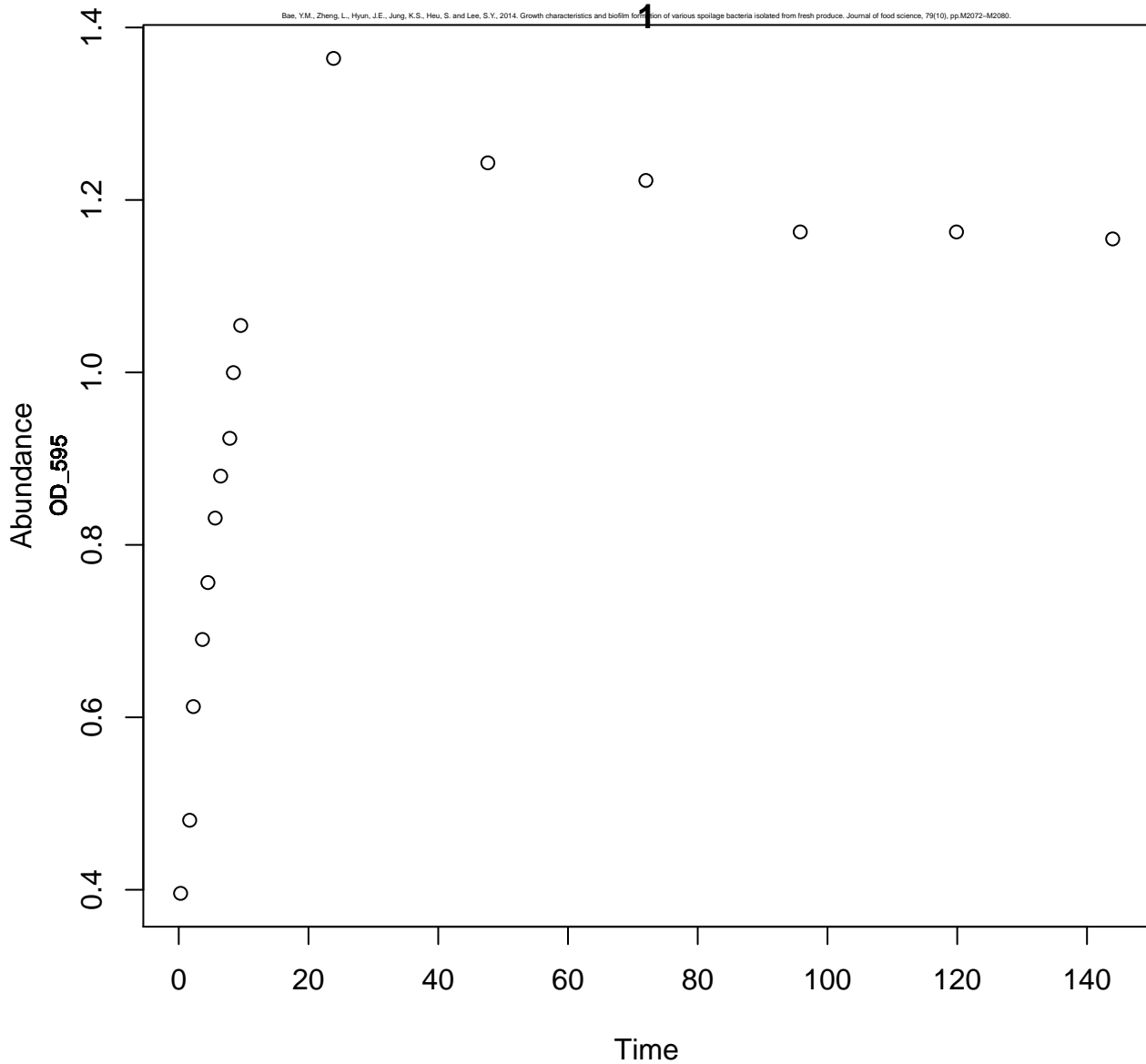
# Stenotrophomonas.maltophilia.2

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





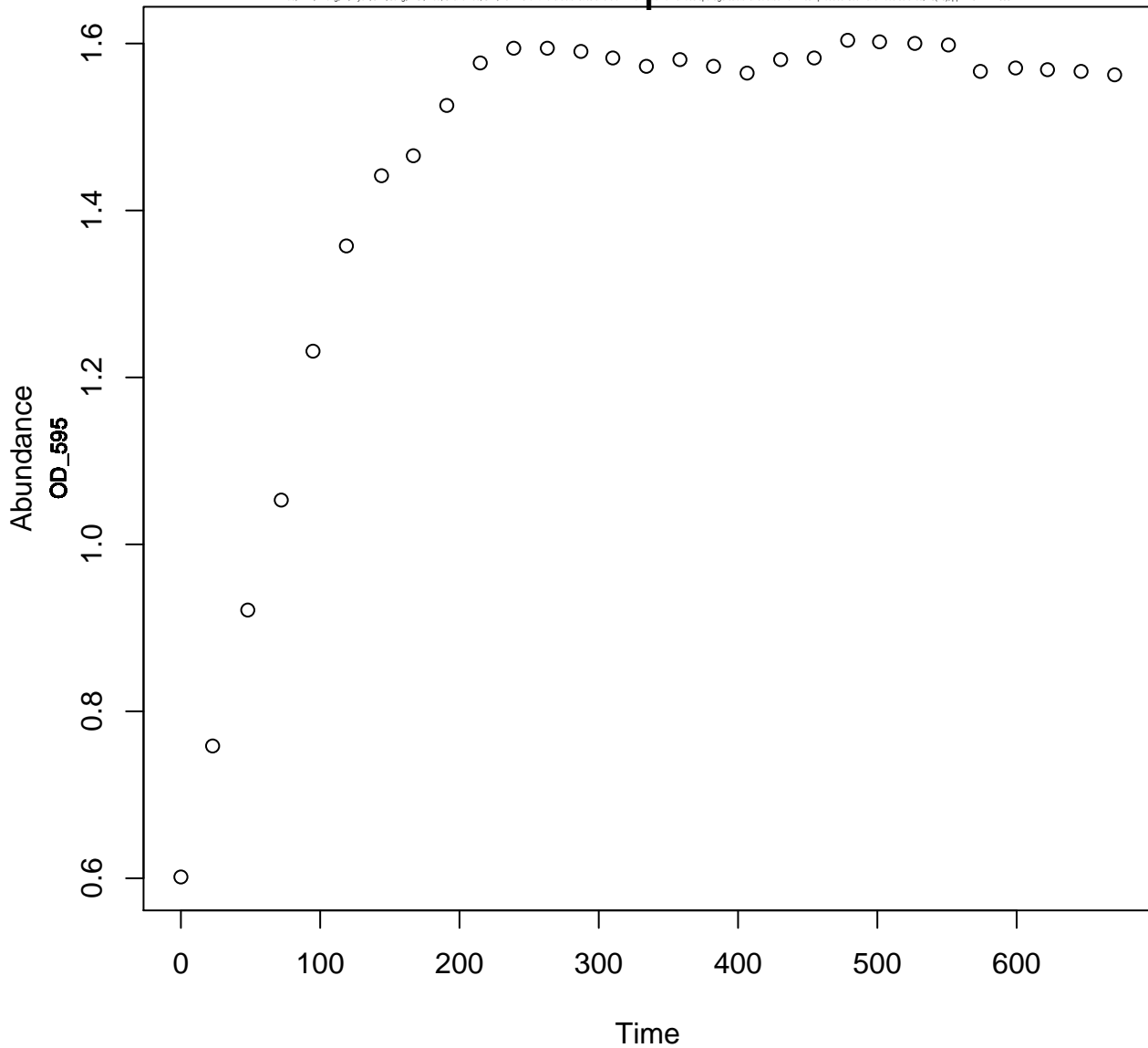
# Klebsiella.pneumonia

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



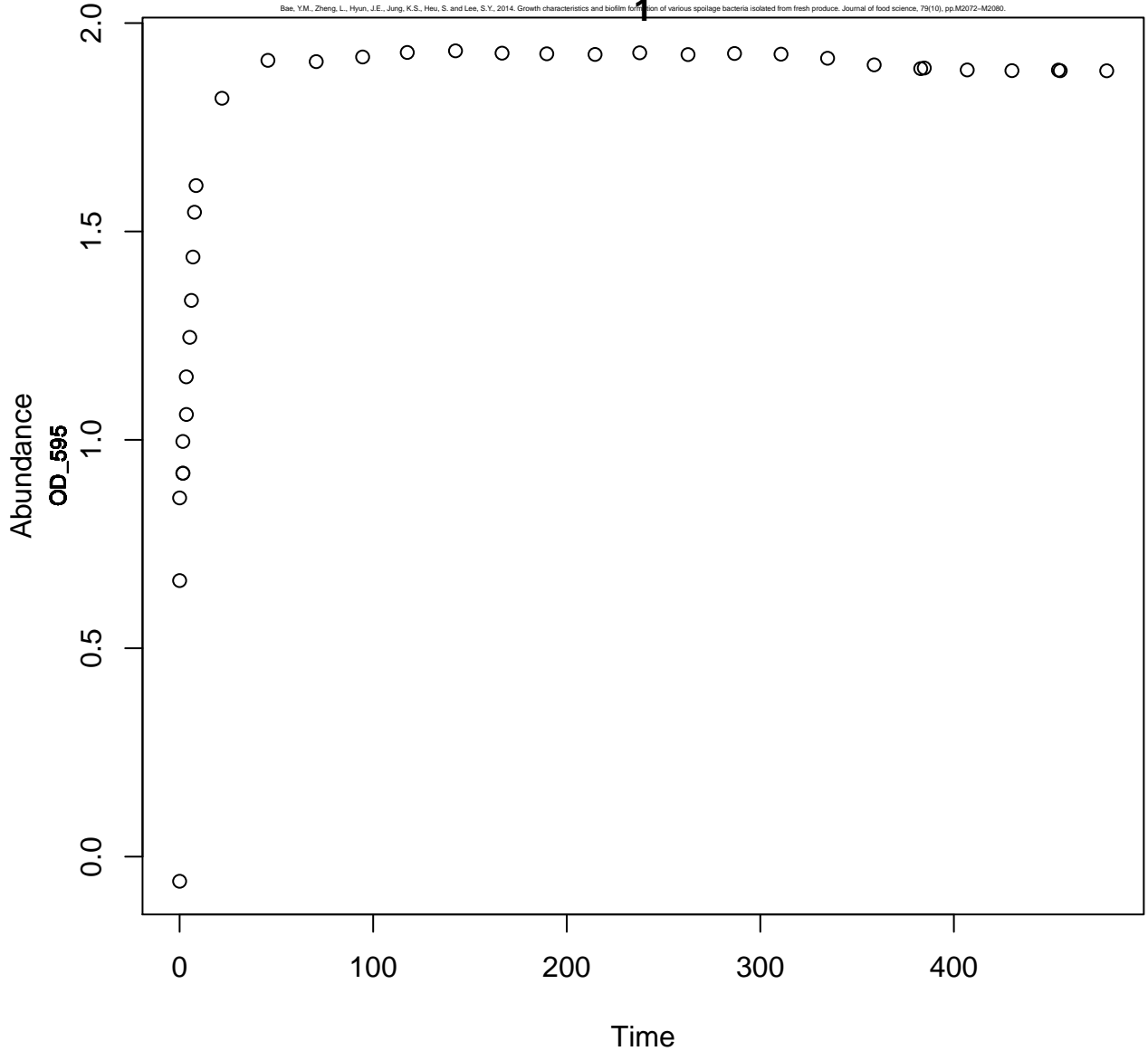
# Klebsiella.pneumonia

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



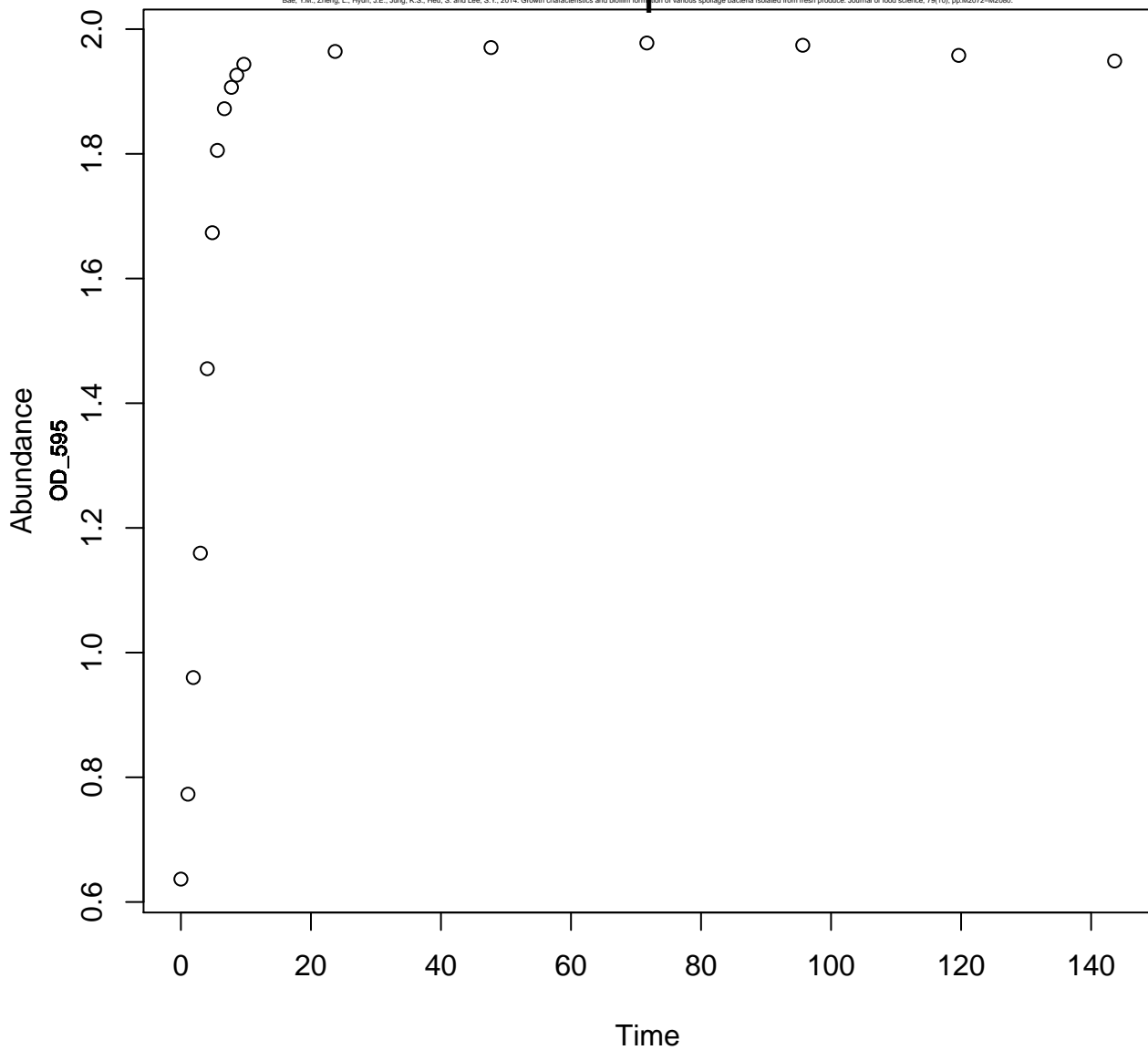
# Klebsiella.pneumonia

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



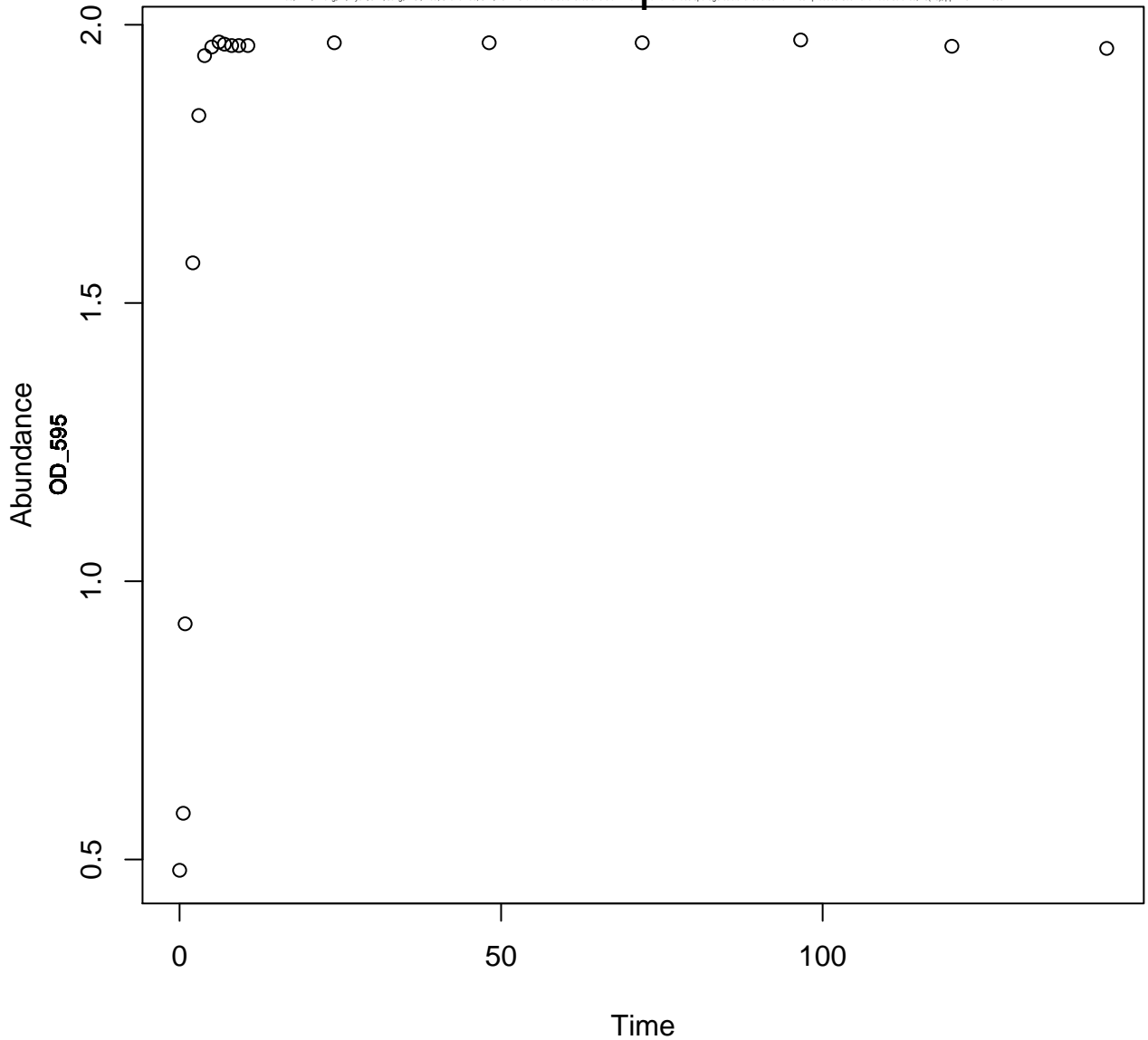
# Klebsiella.pneumonia

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



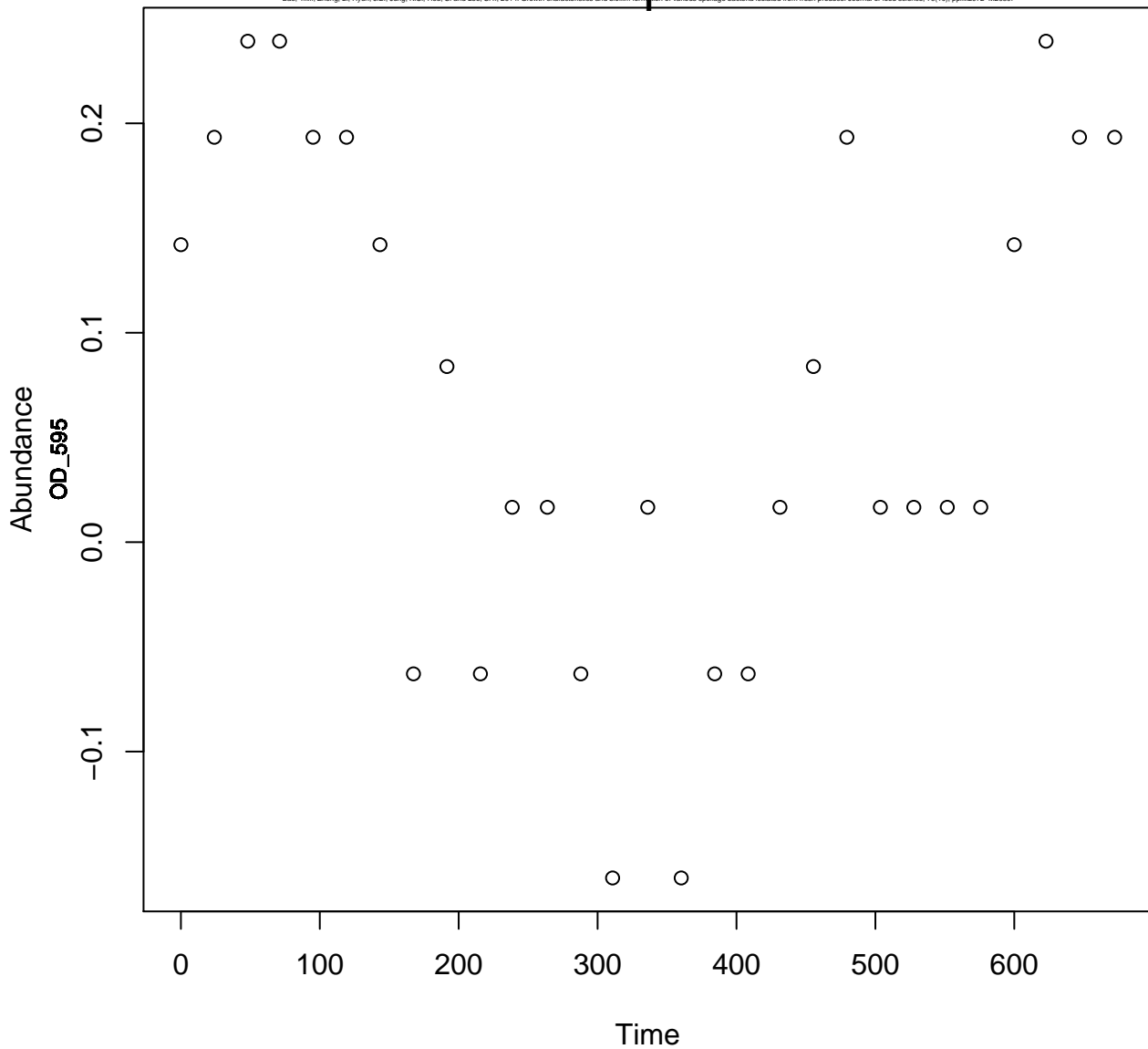
# Dickeya.zeae

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



Dickeya.zeae

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

Abundance

OD<sub>595</sub>

1.8  
1.6  
1.4  
1.2  
1.0  
0.8  
0.6

0

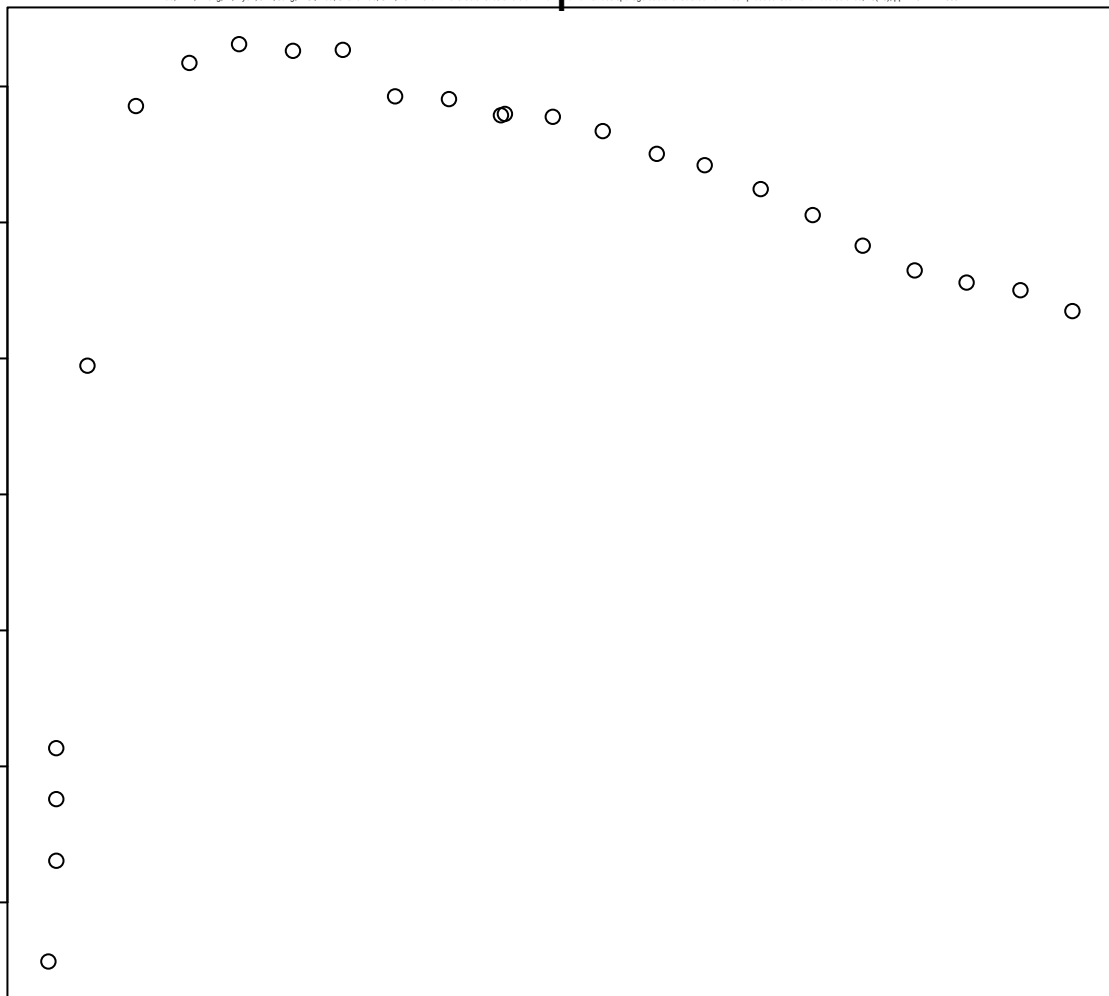
100

200

300

400

Time



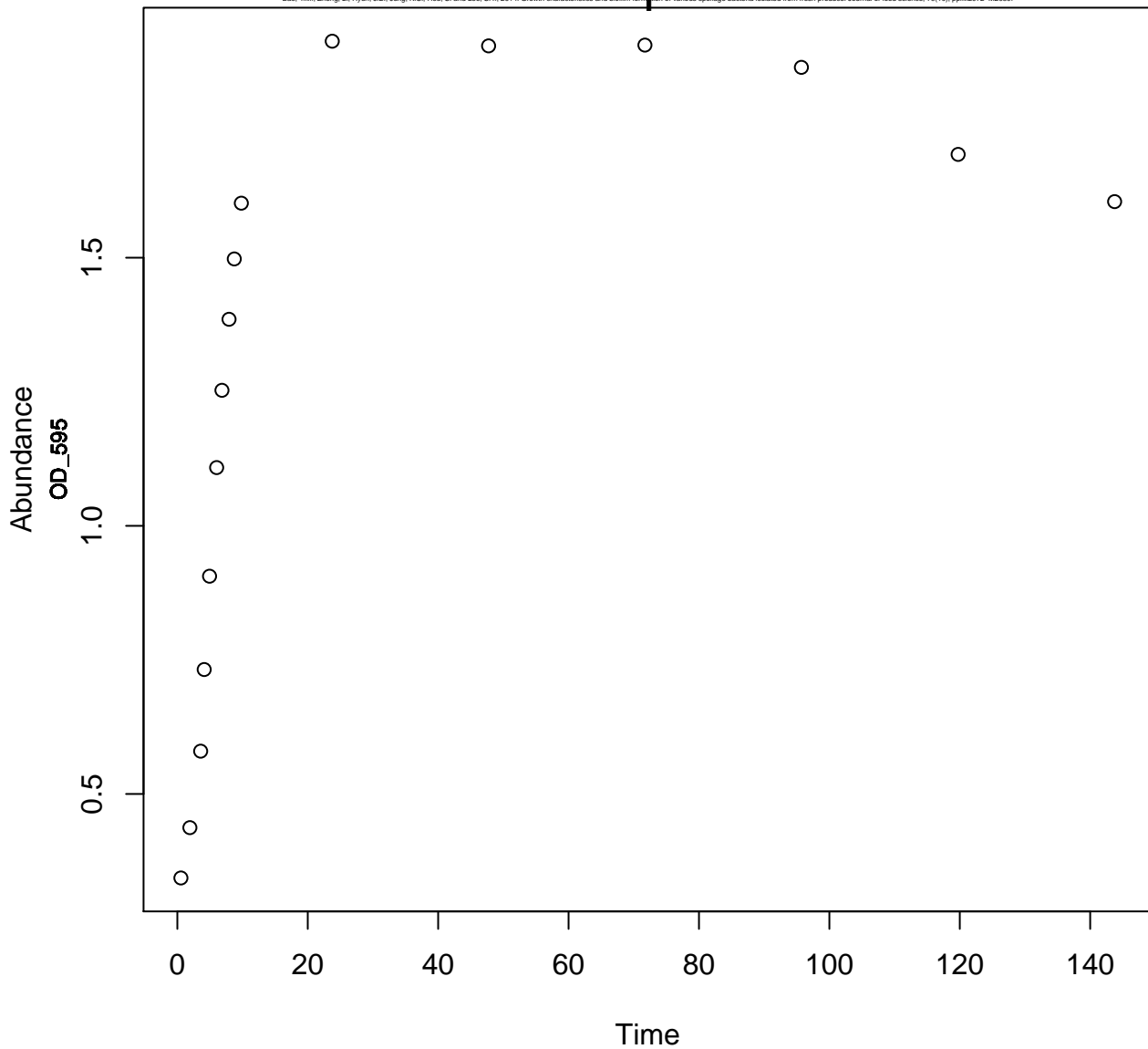
# Dickeya.zeae

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



Dickeya.zeae

TSB

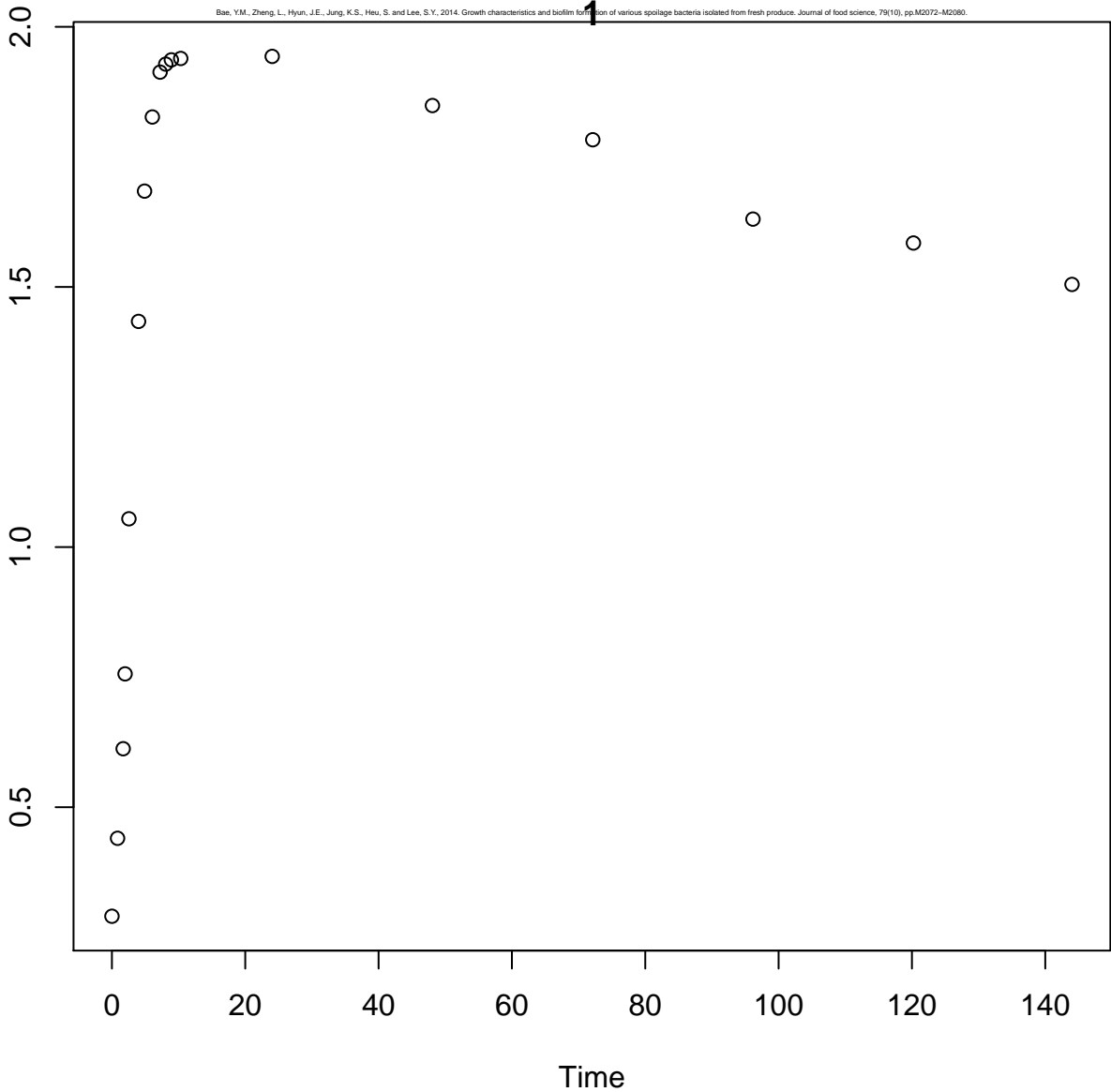
35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

Abundance

OD<sub>595</sub>





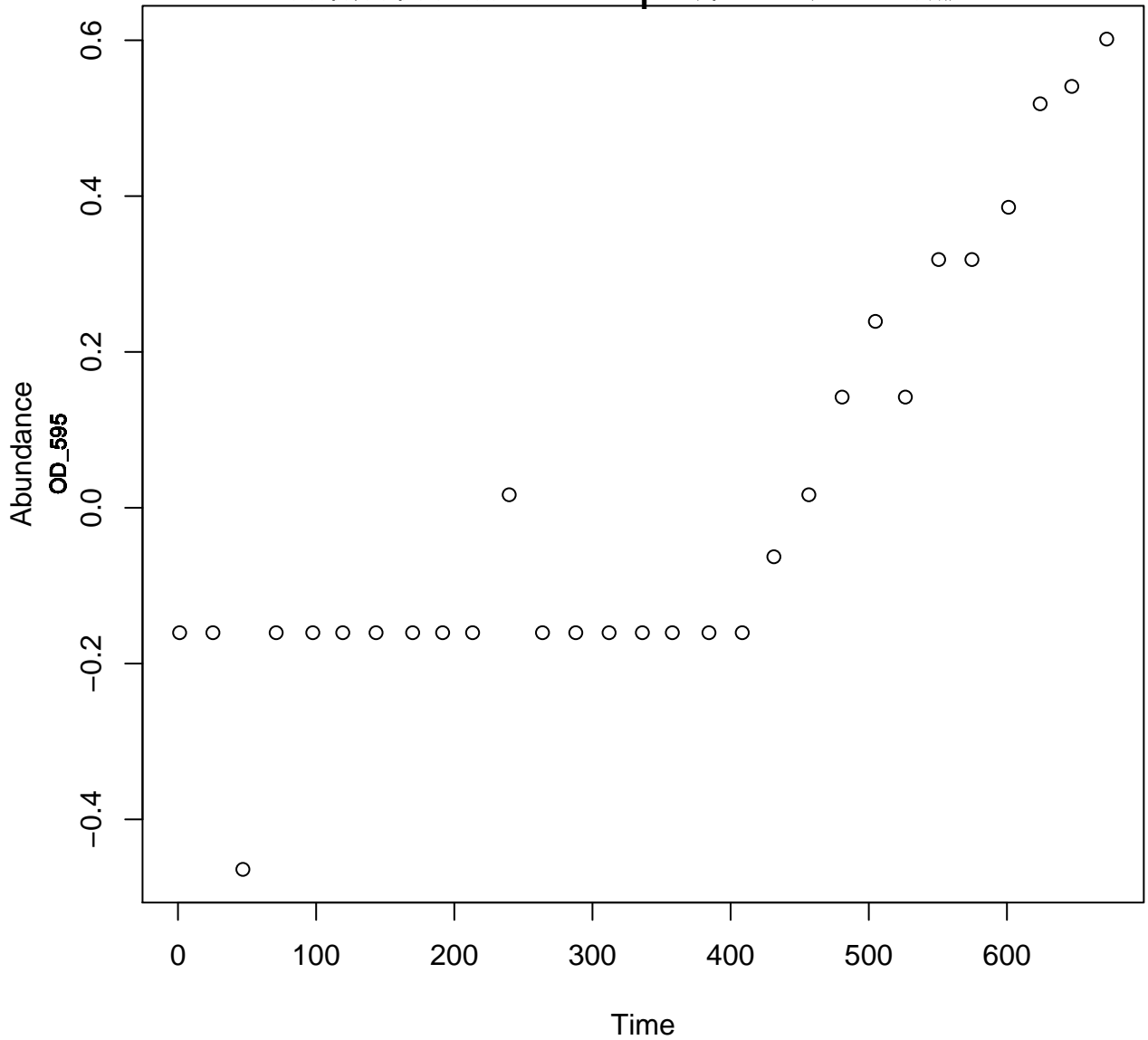
# Pectobacterium.carotovorum.subsp..Carotovorum.Pcc2

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



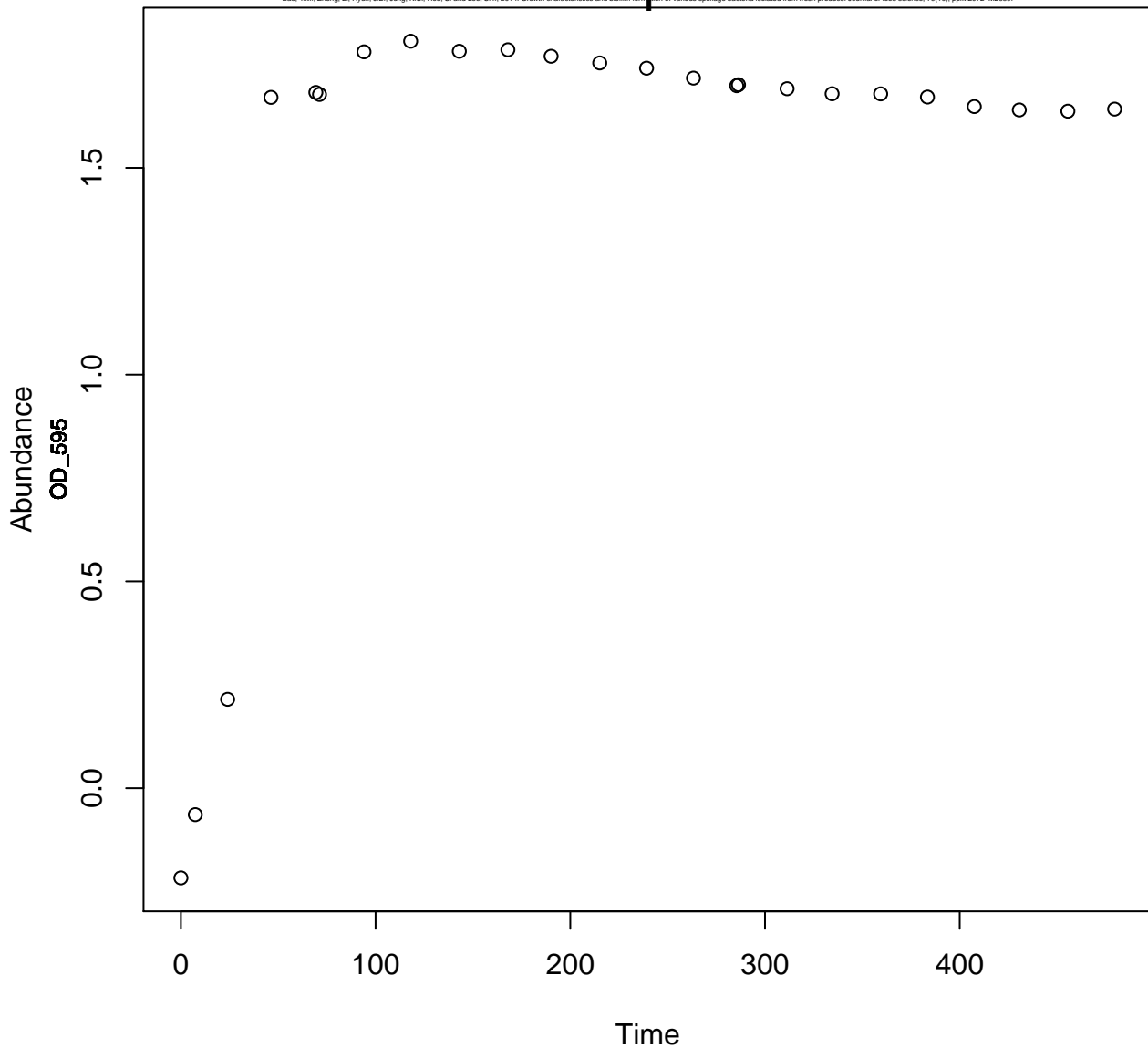
# Pectobacterium.carotovorum.subsp..Carotovorum.Pcc2

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



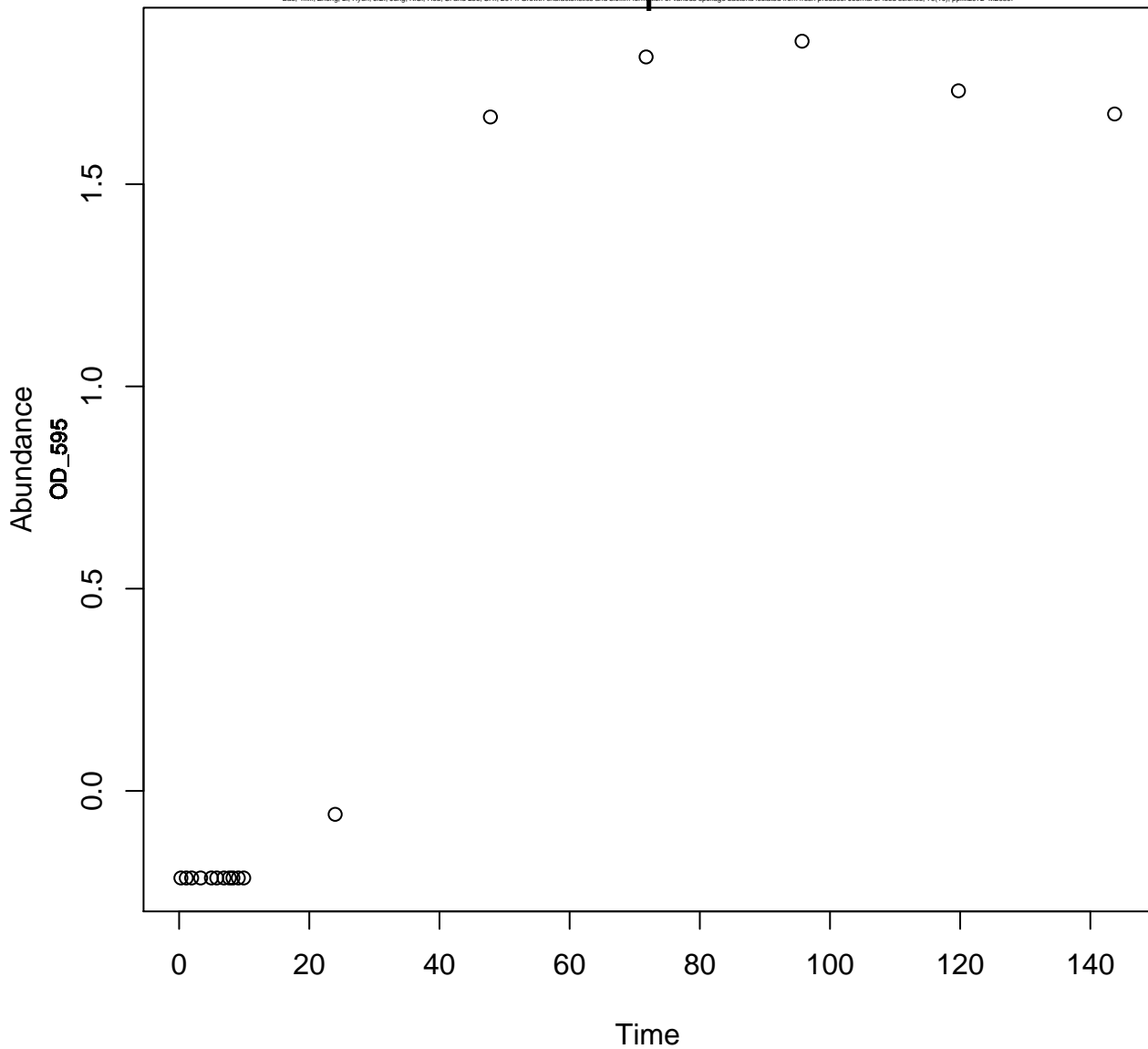
# Pectobacterium.carotovorum.subsp..Carotovorum.Pcc2

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

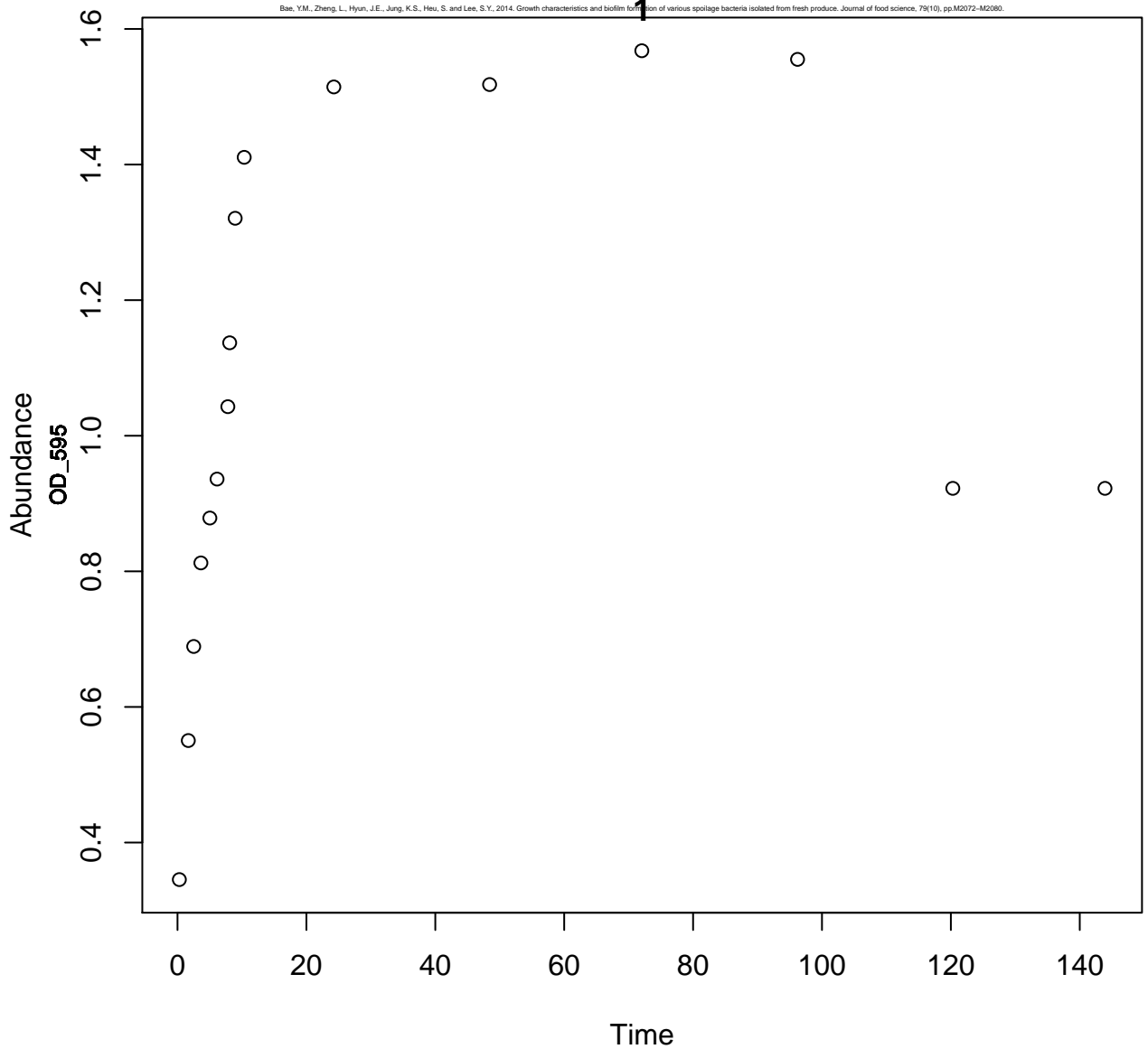


TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. *Journal of food science*, 79(10), pp.M2072-M2080.



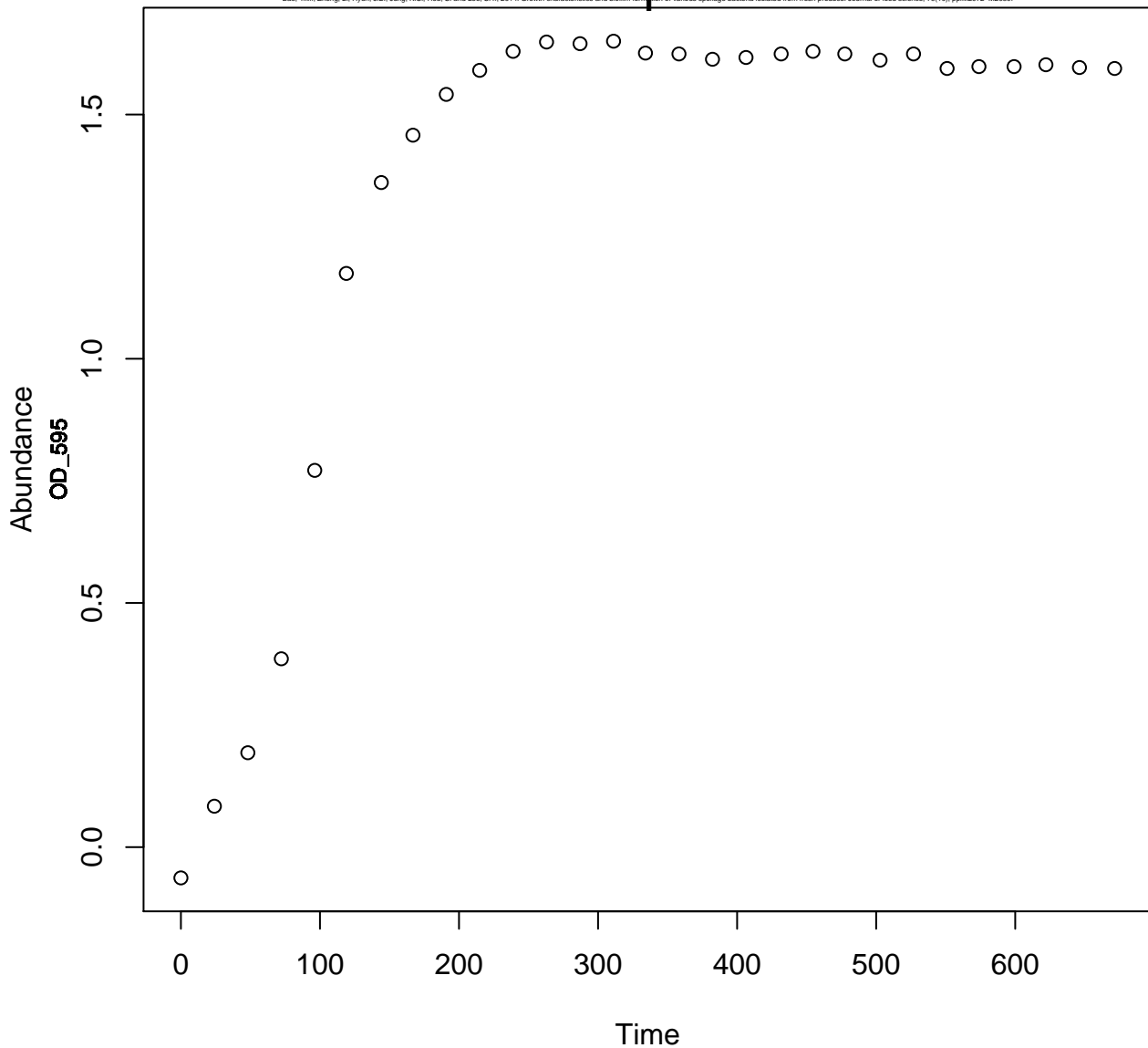
# Pantoea.agglomerans..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



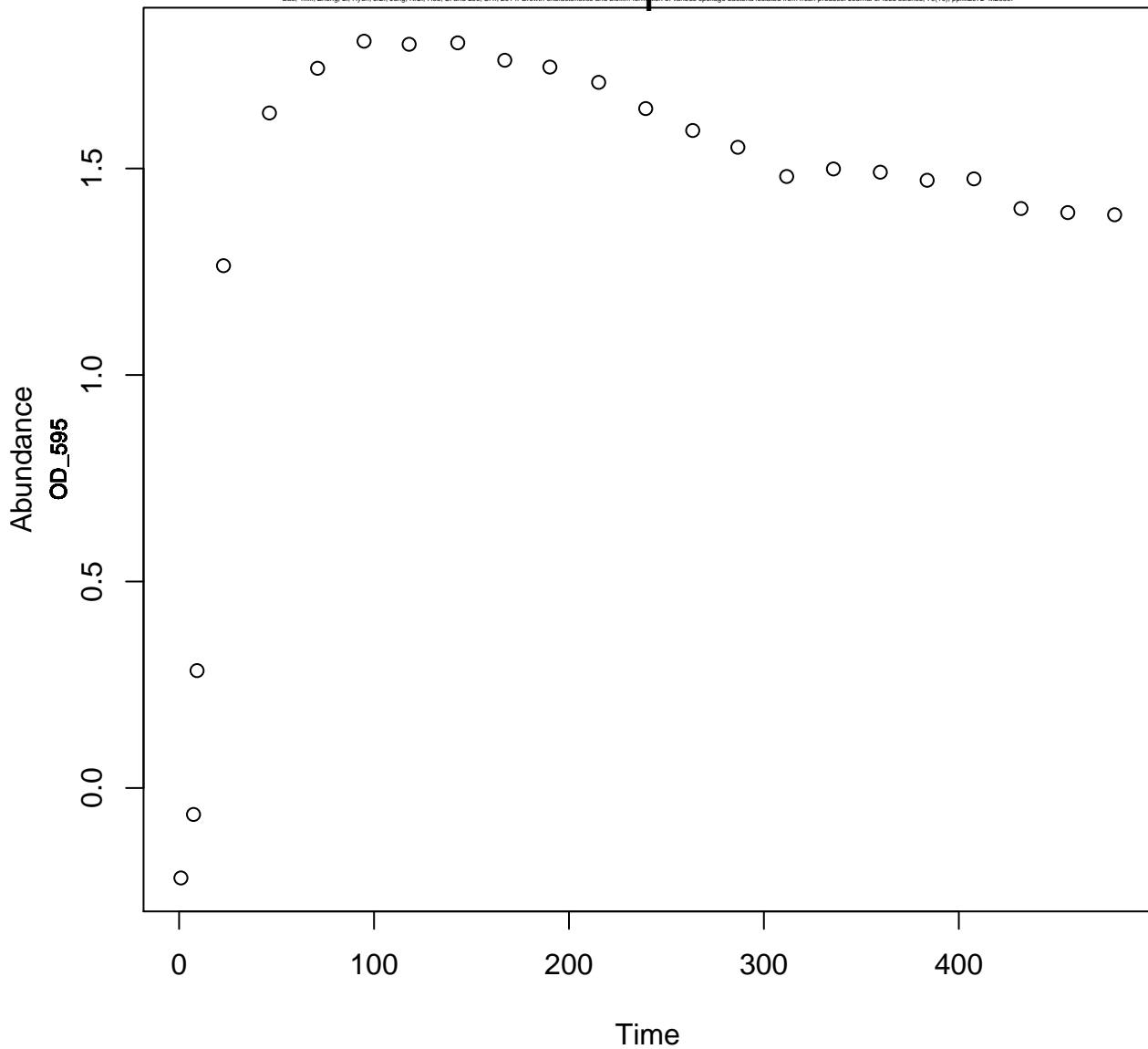
# Pantoea.agglomerans..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



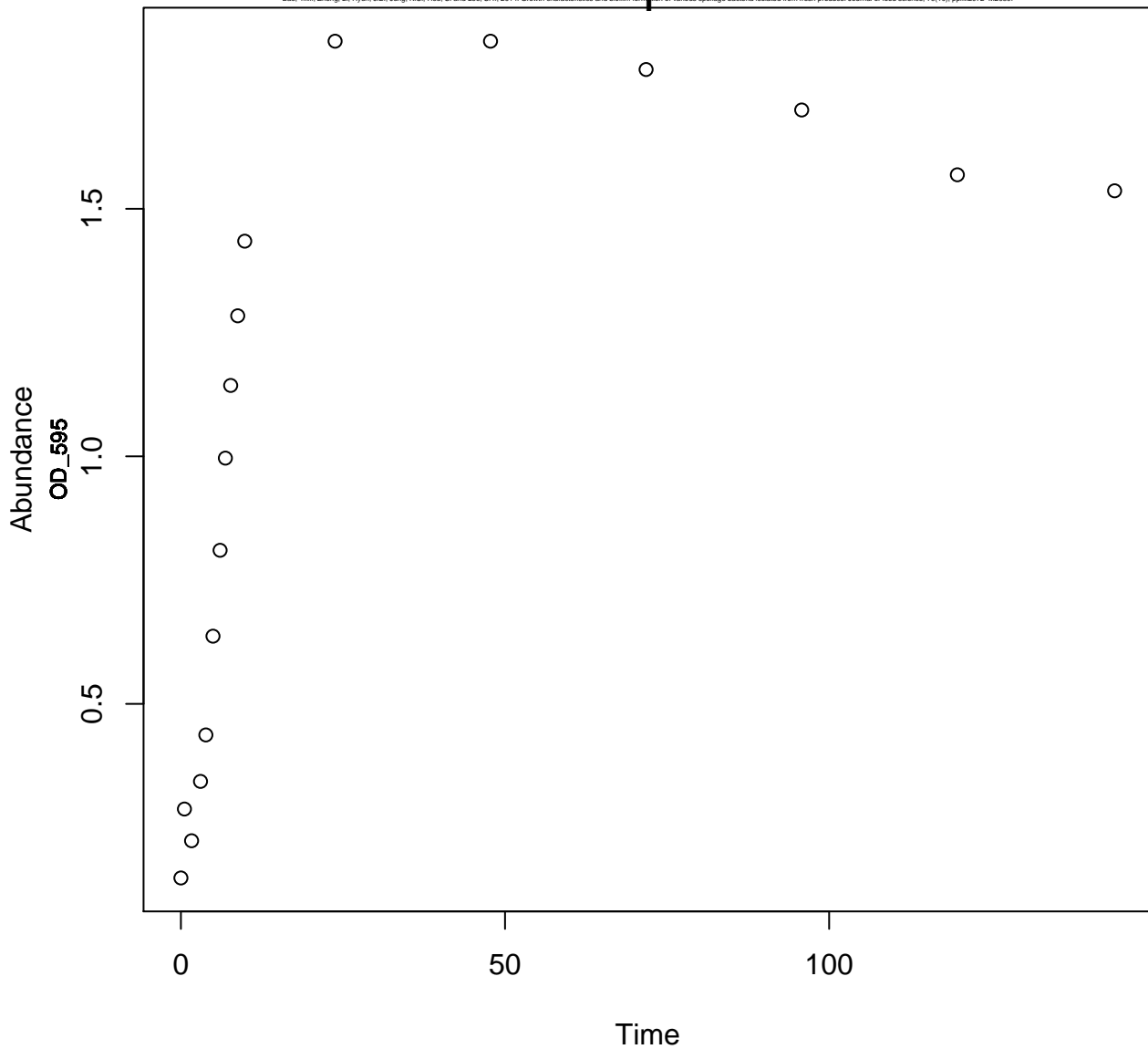
# Pantoea.agglomerans..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



# Pantoea.agglomerans..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

Abundance

OD<sub>595</sub>

1.5

1.0

0.5

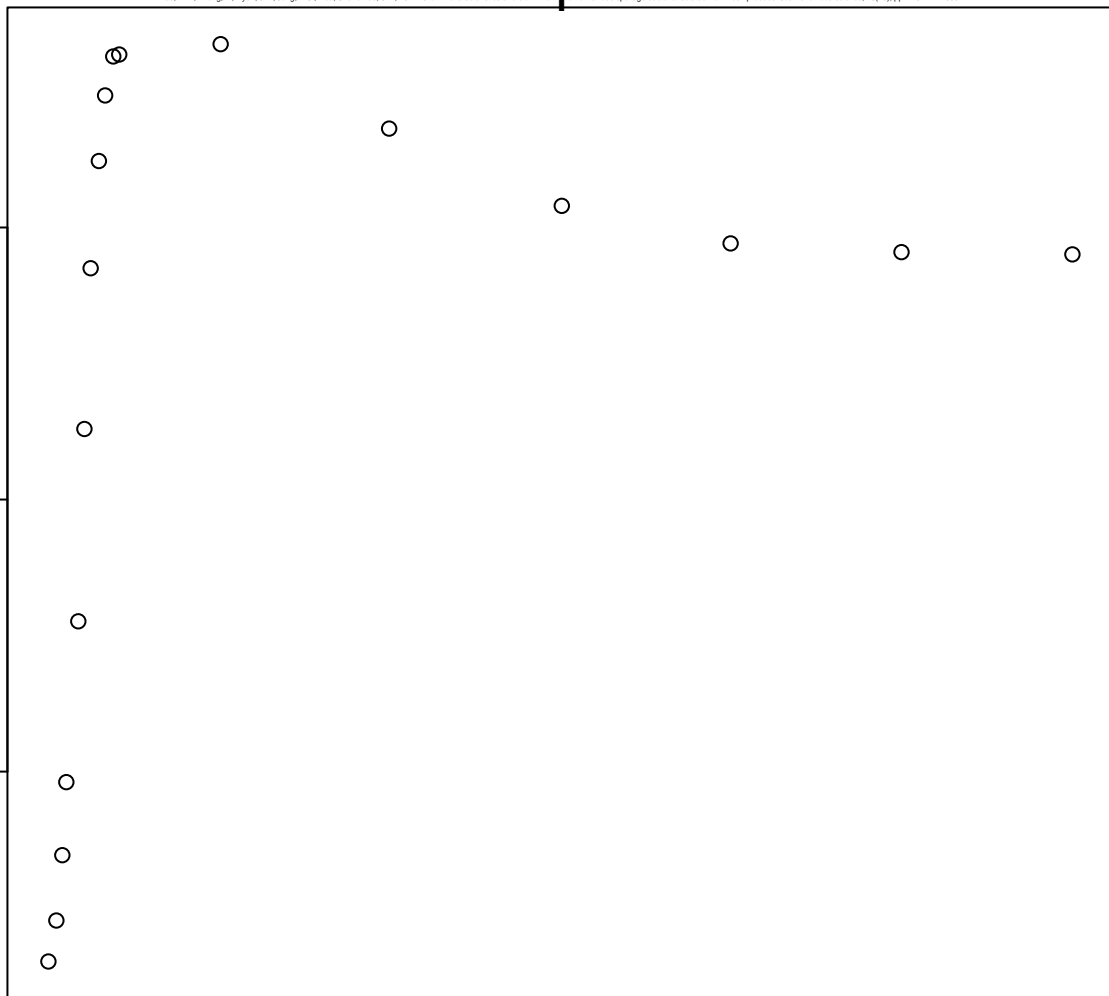
0

50

100

150

Time





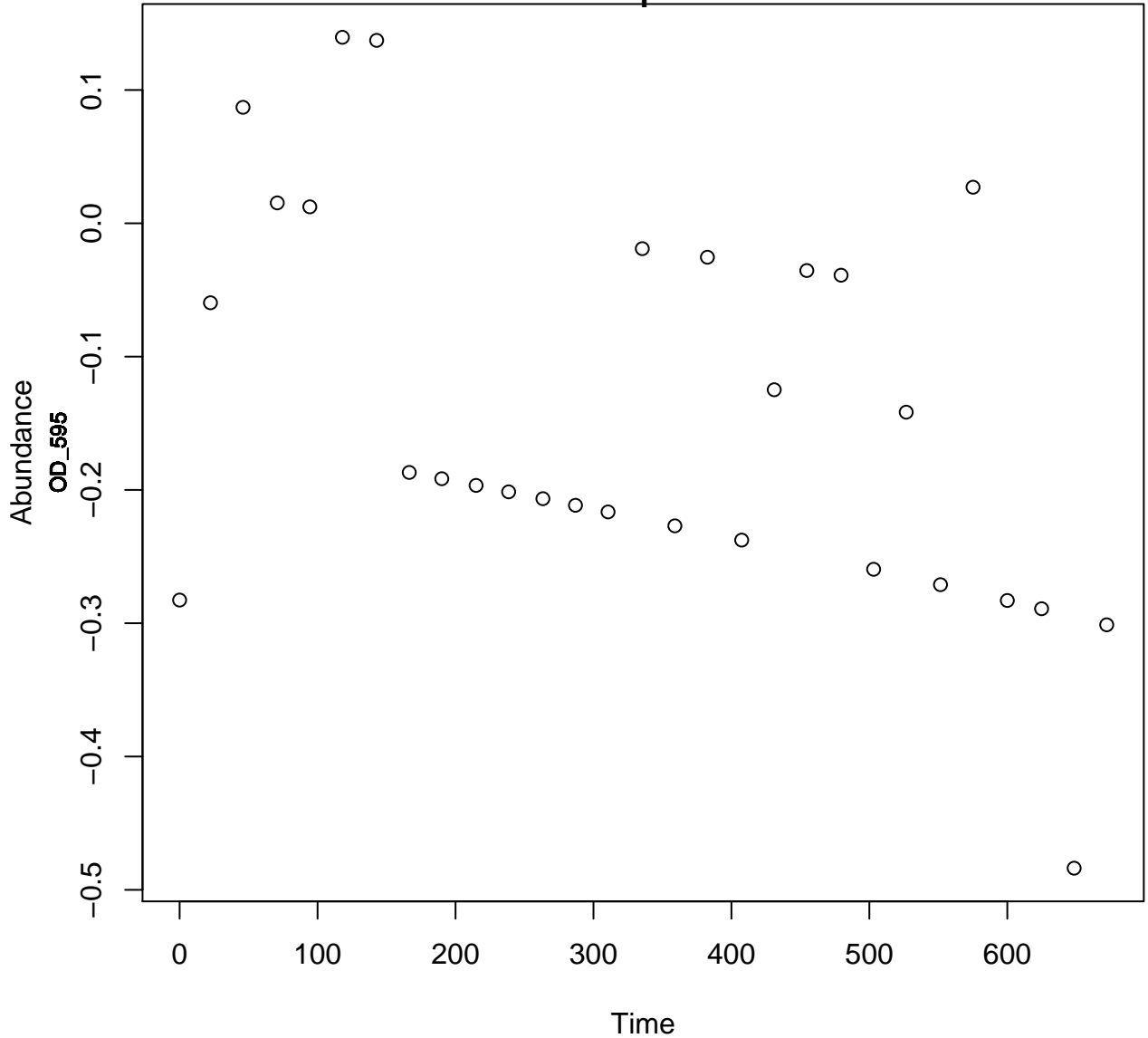
# Dickeya.zeae..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



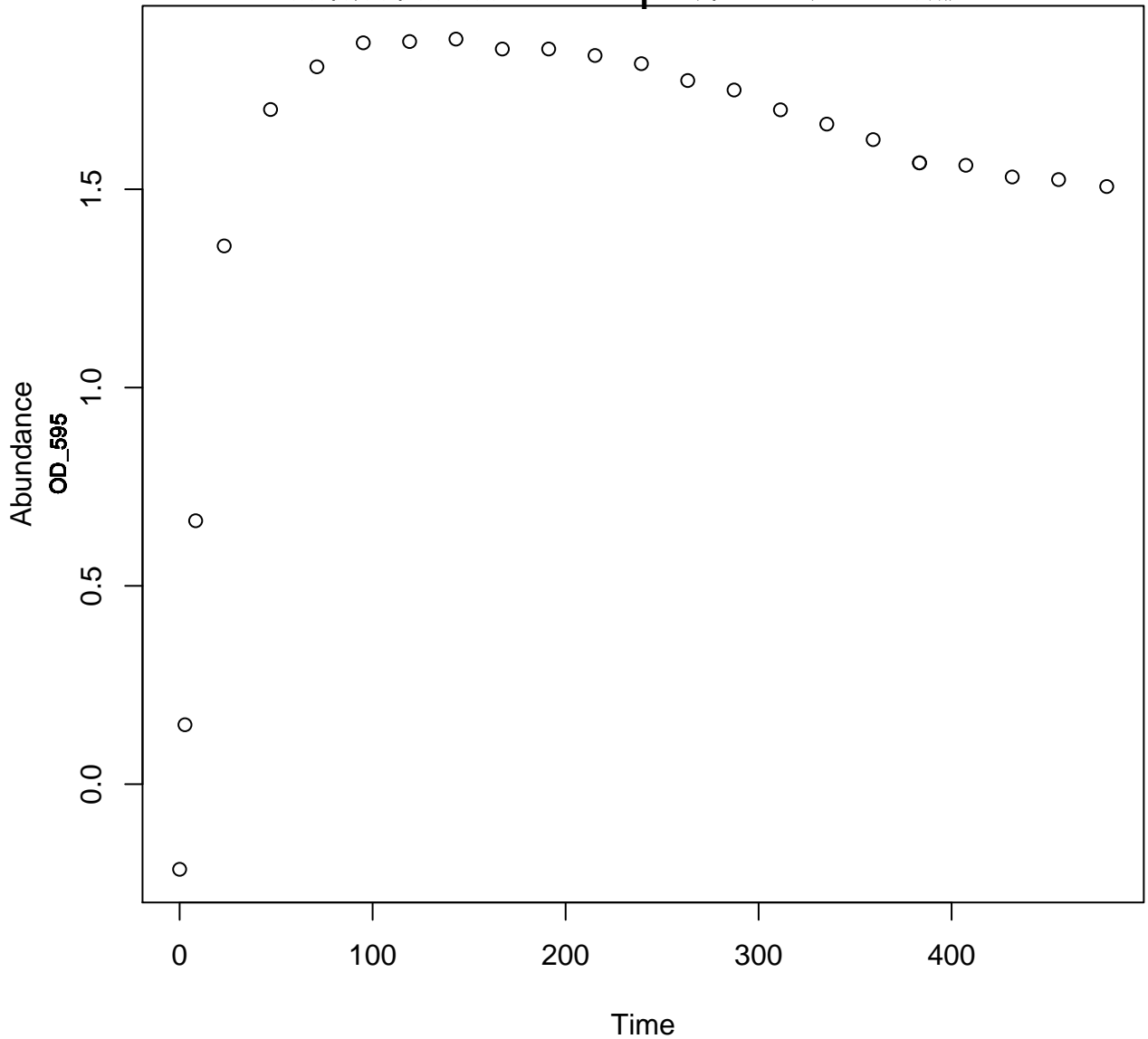
# Dickeya.zeae..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



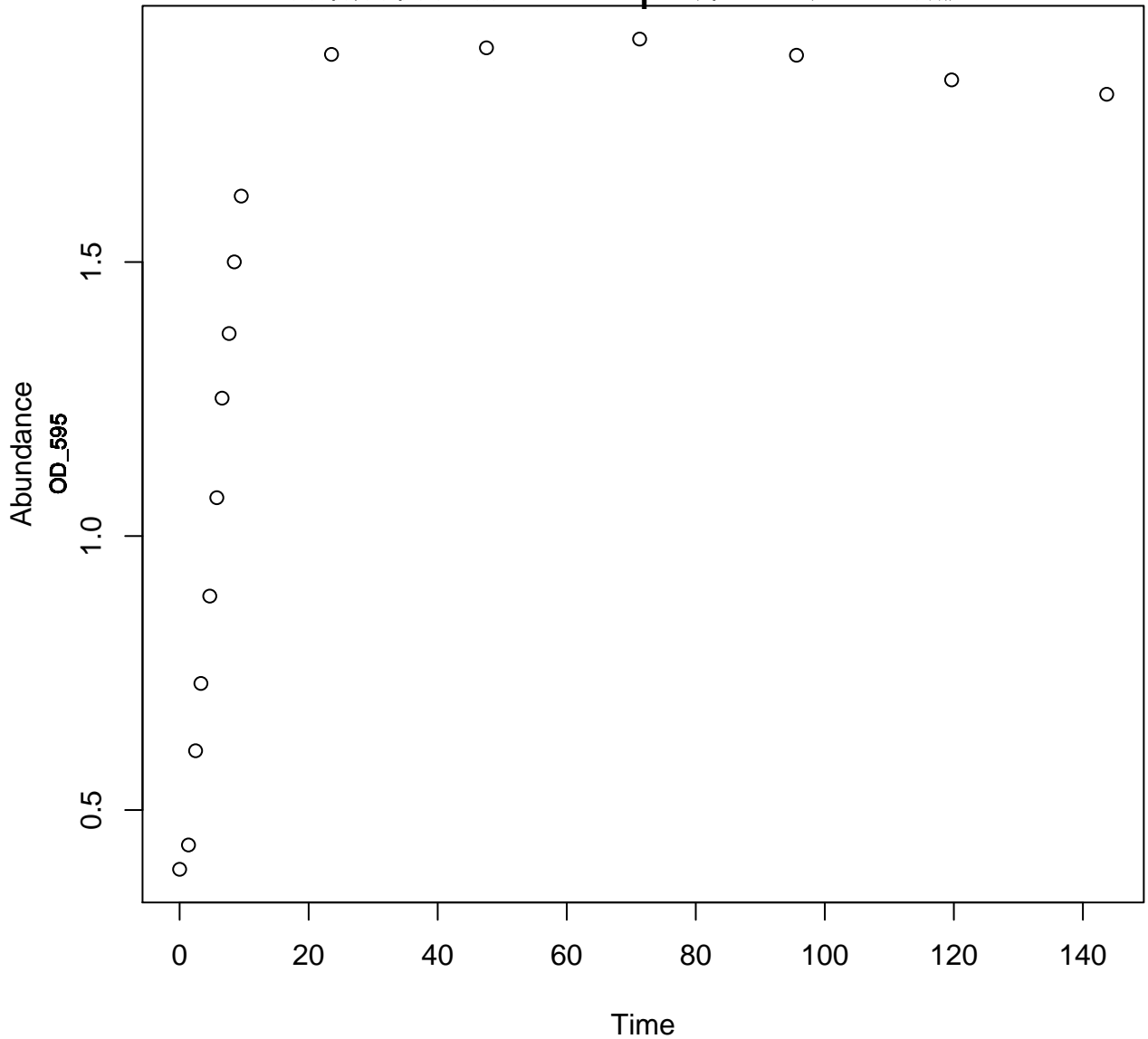
Dickeya.zeae..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



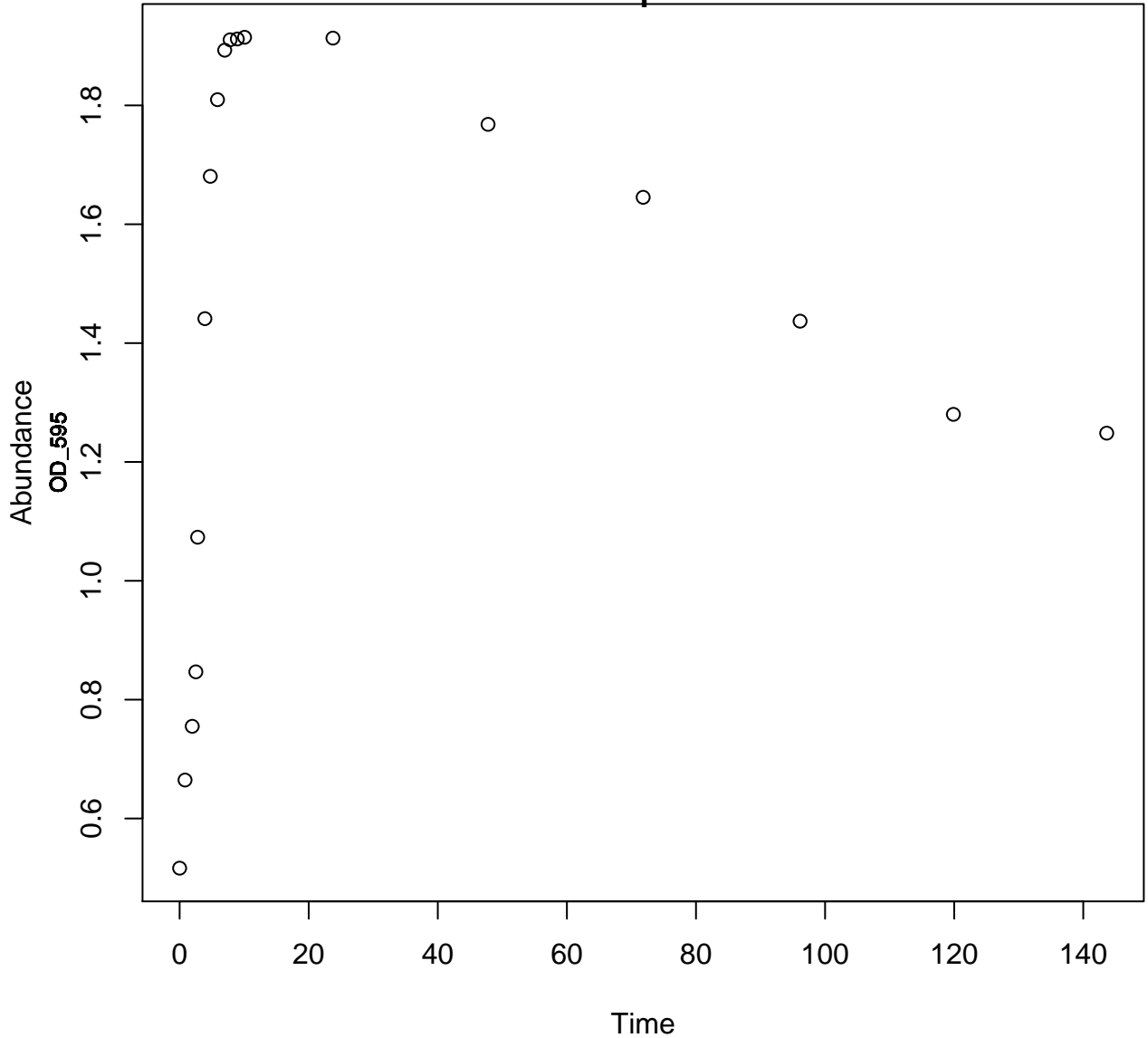
# Dickeya.zeae..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



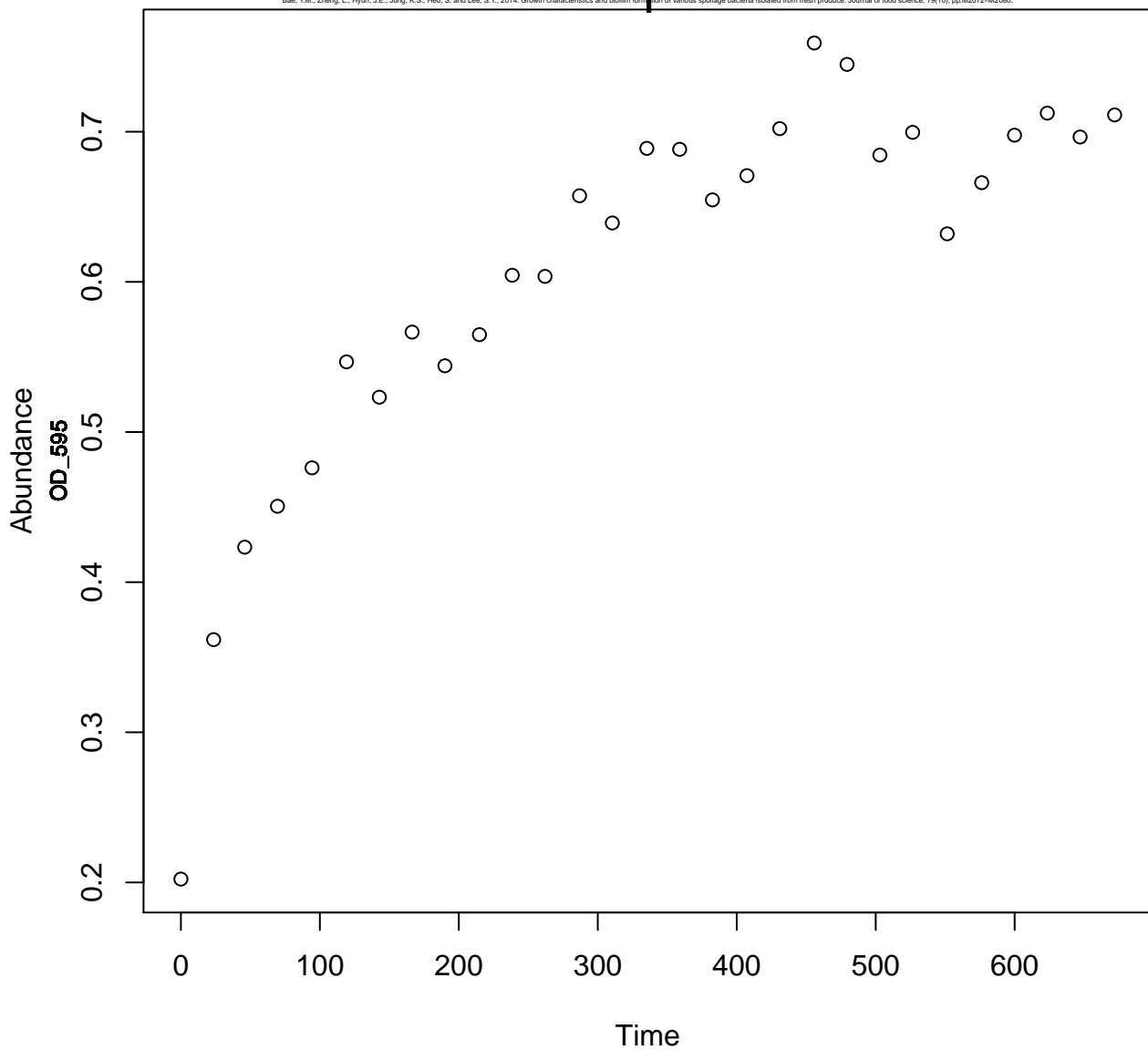
# Acinetobacter.clacoaceticus..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



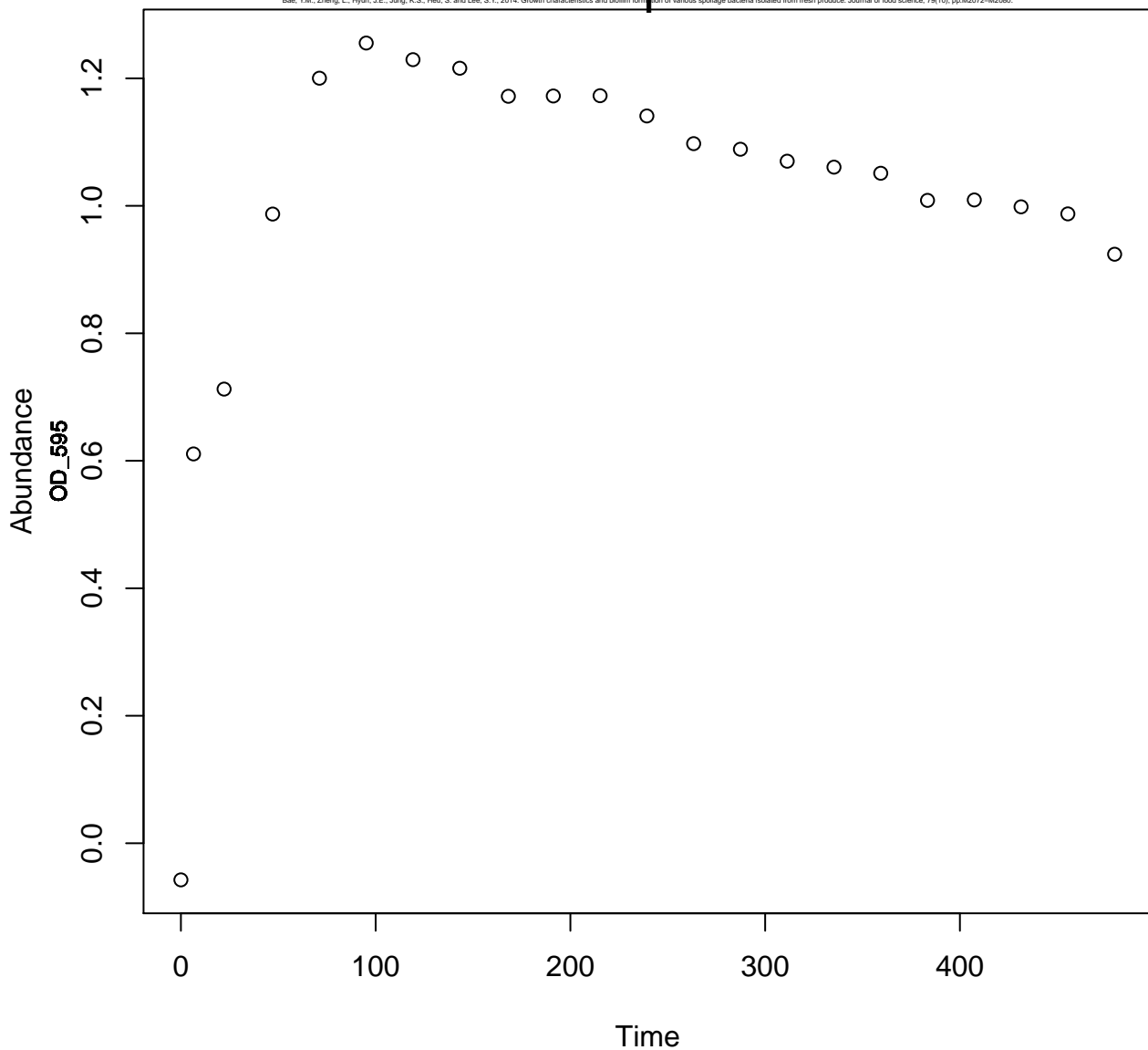
# Acinetobacter.clacoaceticus..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



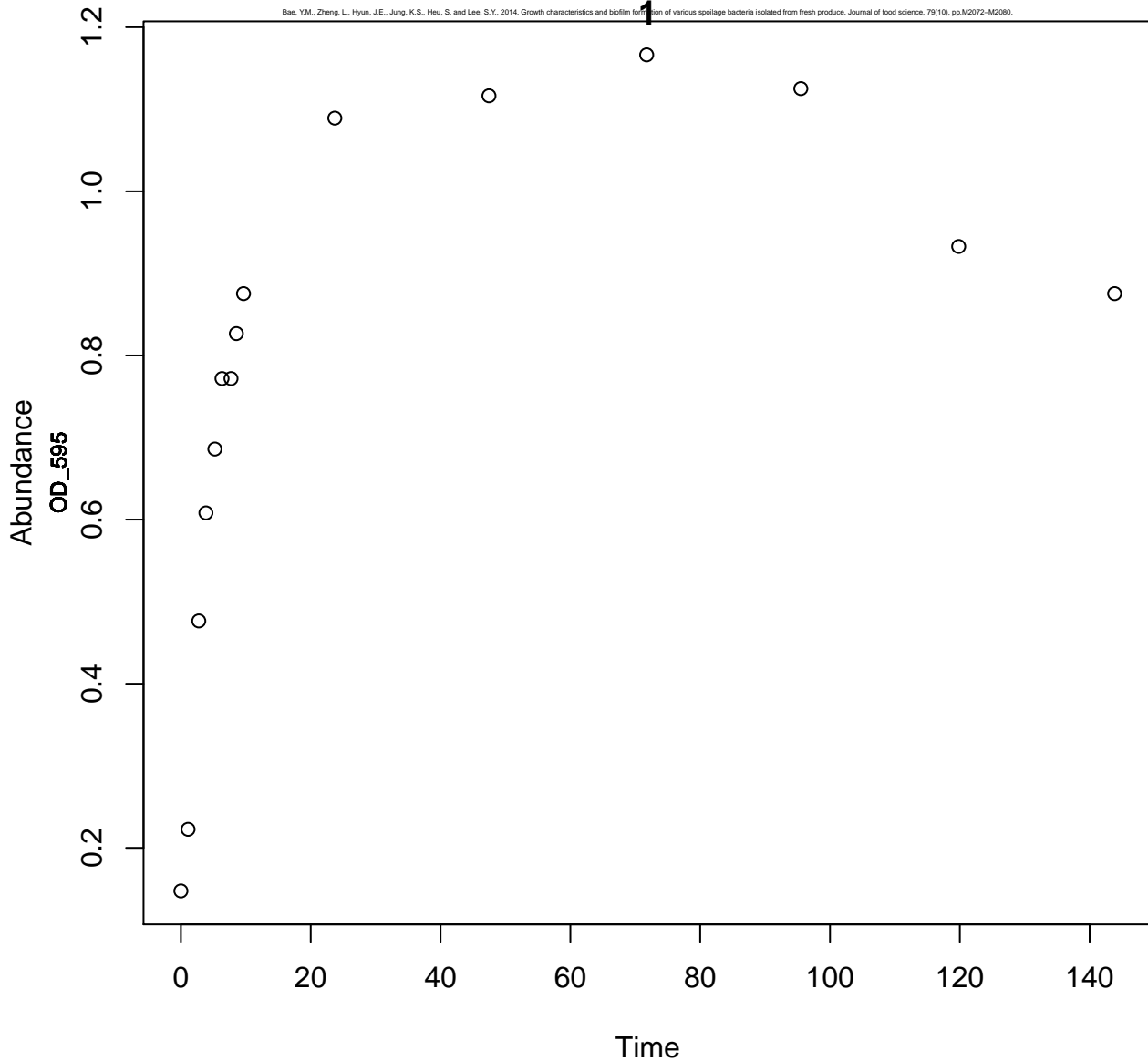
# Acinetobacter.clacoaceticus..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



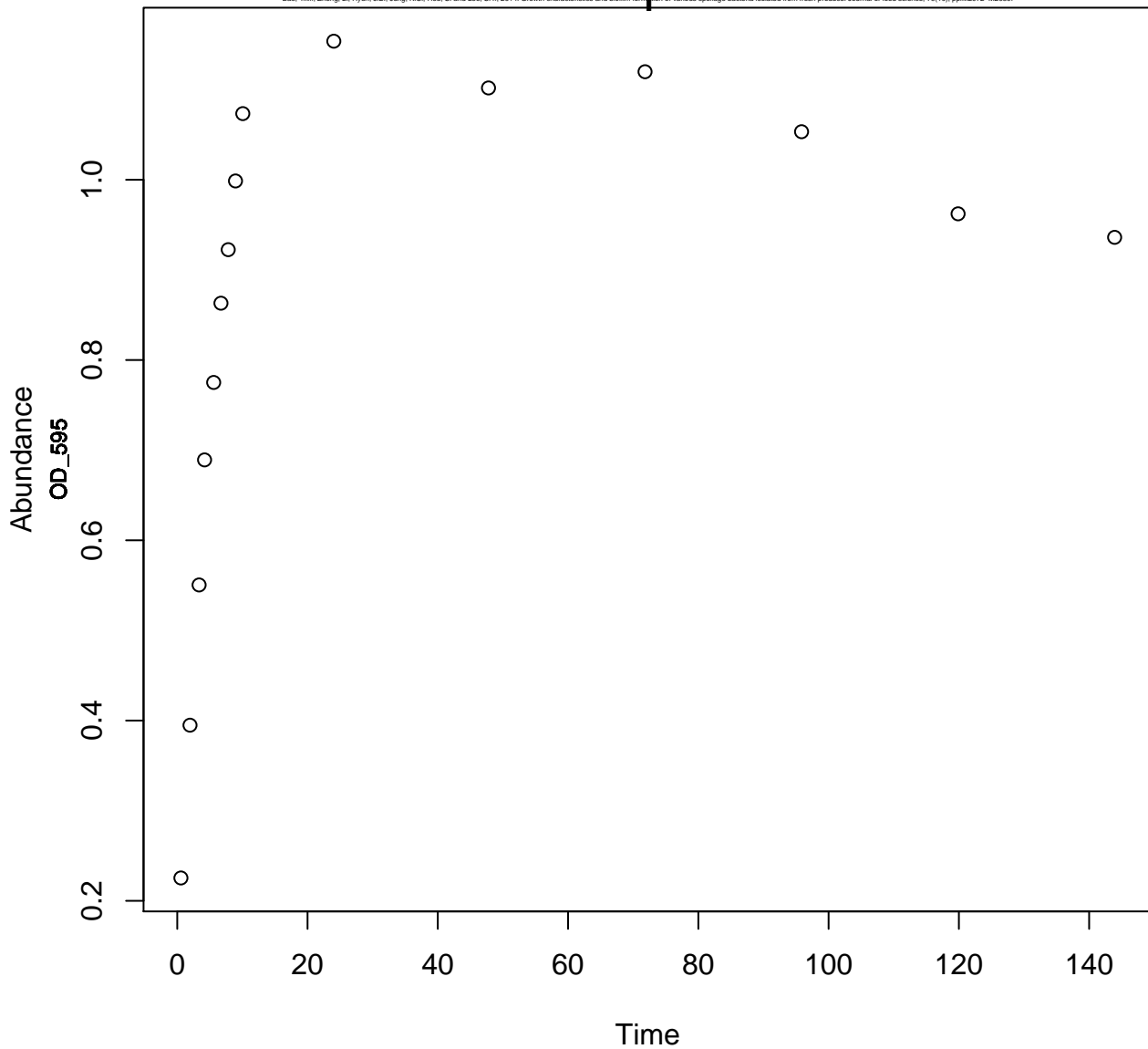
# Acinetobacter.clacoaceticus..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





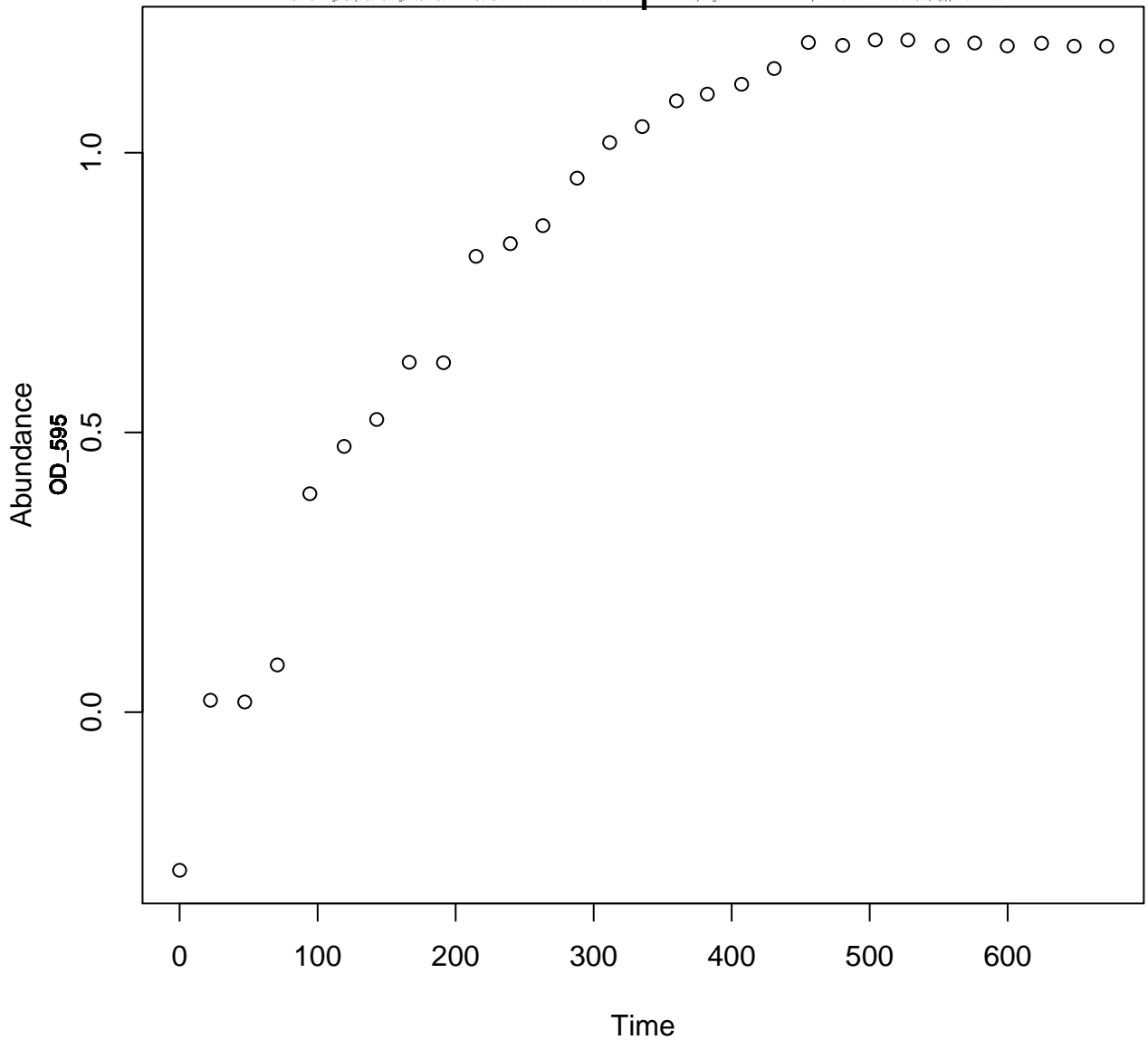
# Stenotrophomonas.maltophilia..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



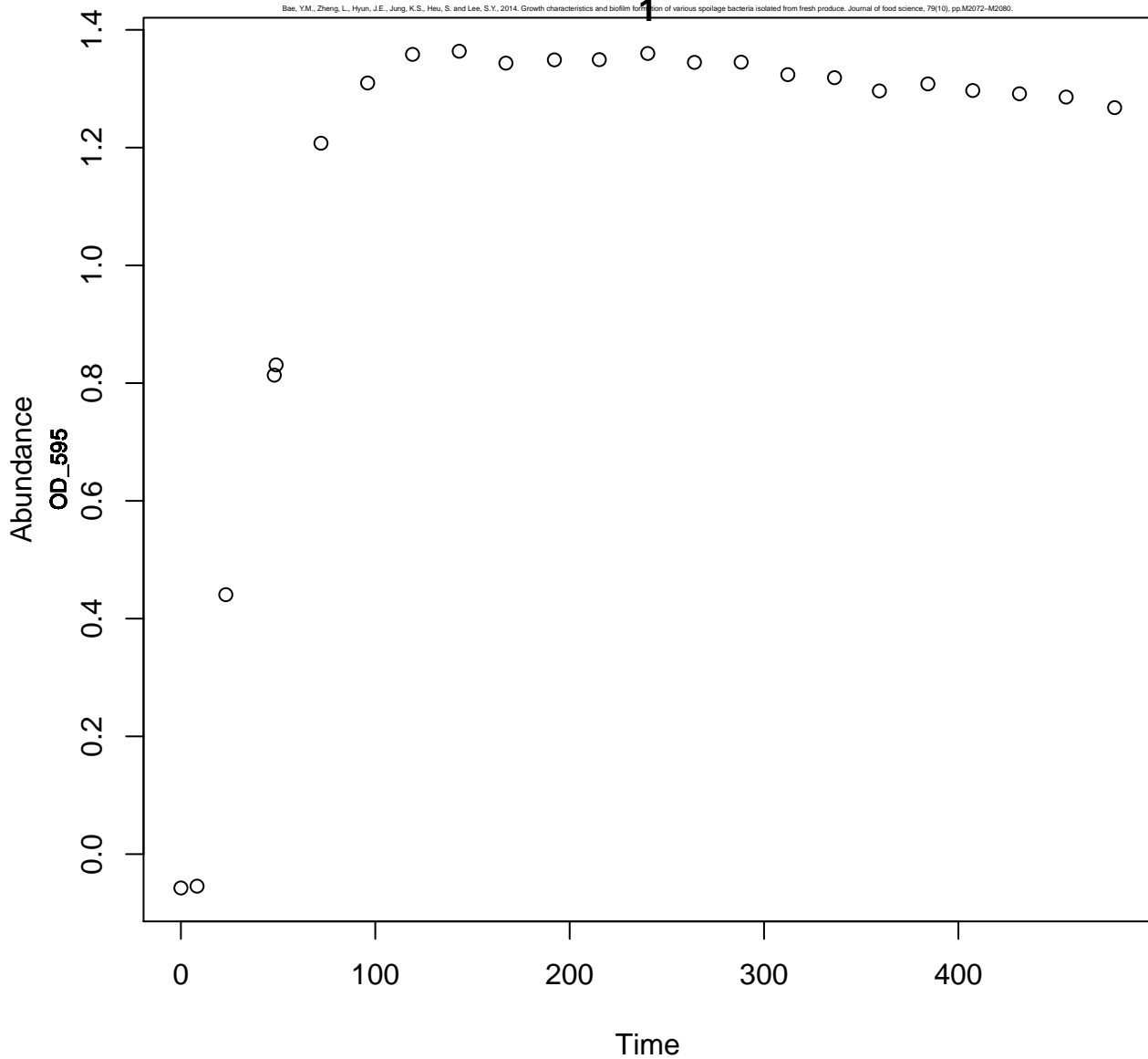
# Stenotrophomonas.maltophilia..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



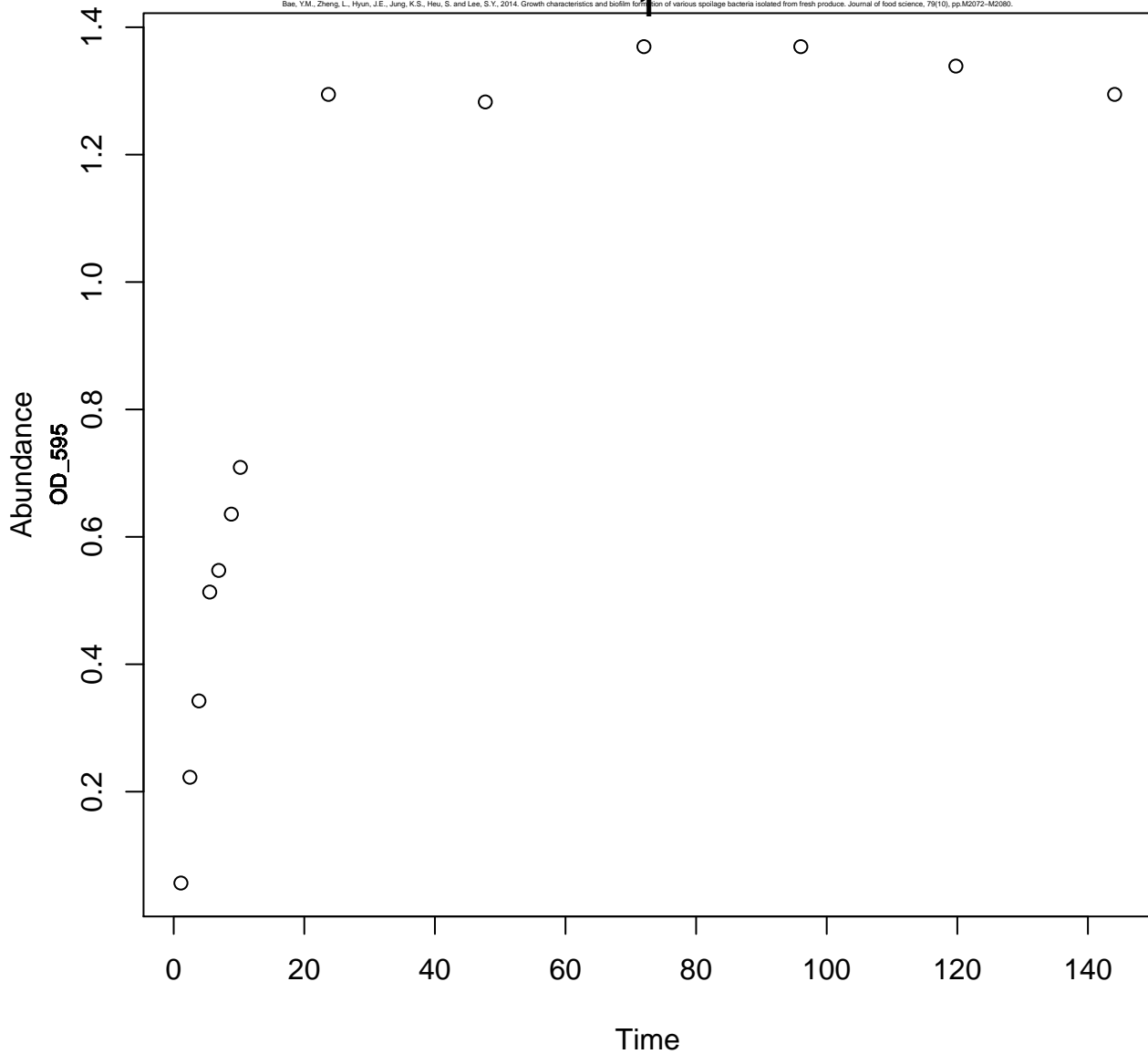
# Stenotrophomonas.maltophilia..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



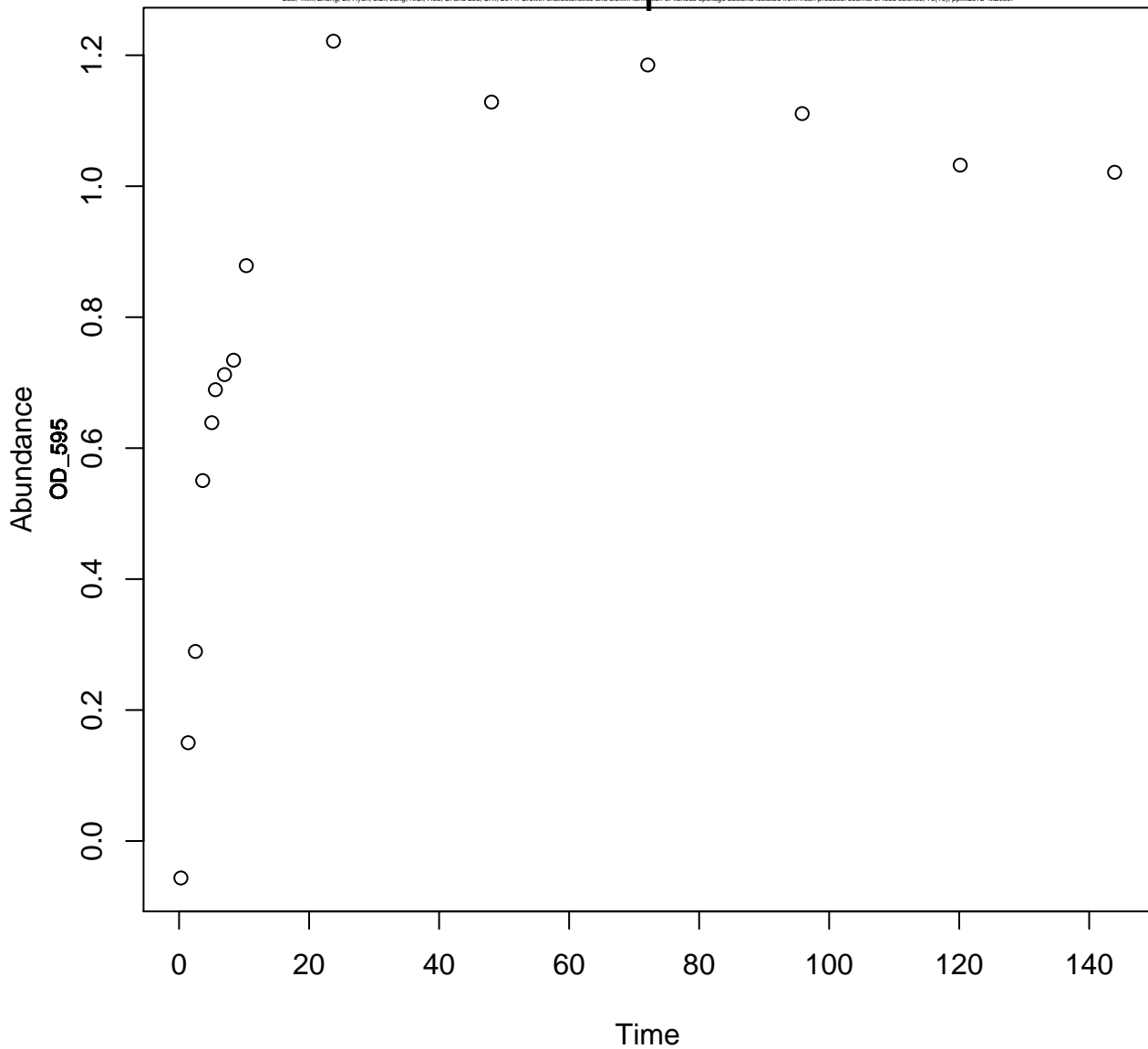
# Stenotrophomonas maltophilia..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



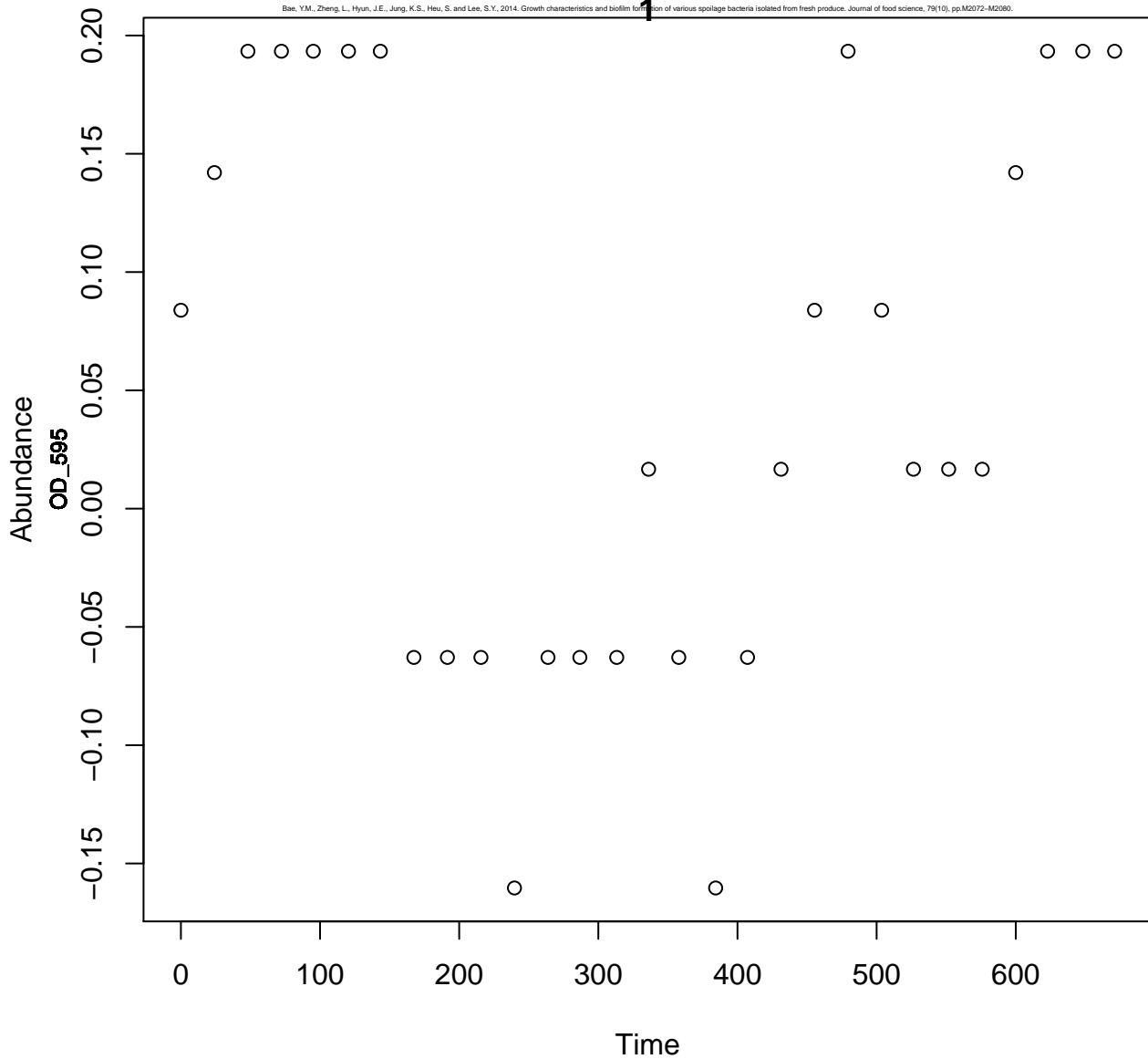
# Klebsiella.pneumonia..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



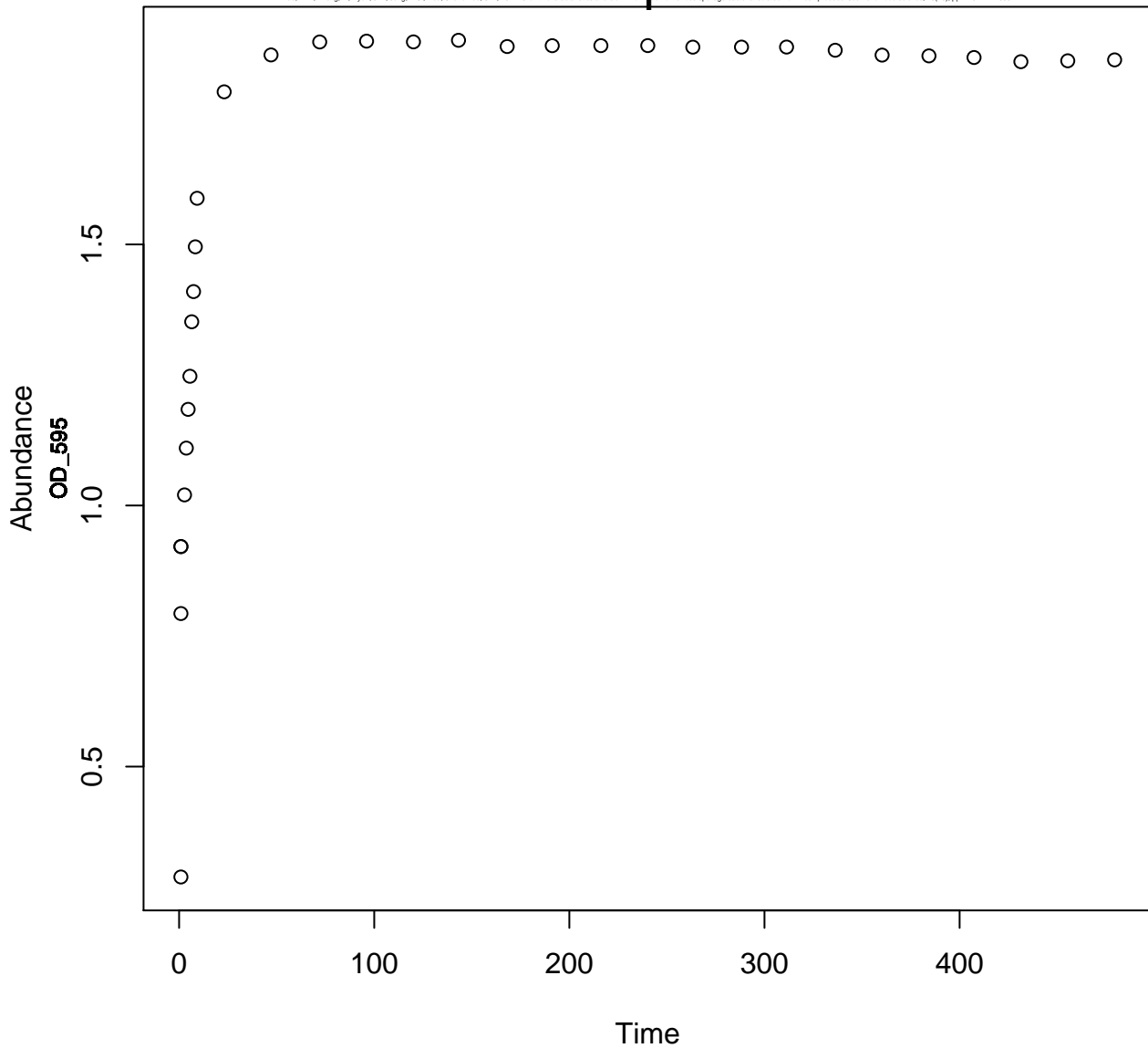
# Klebsiella.pneumonia..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



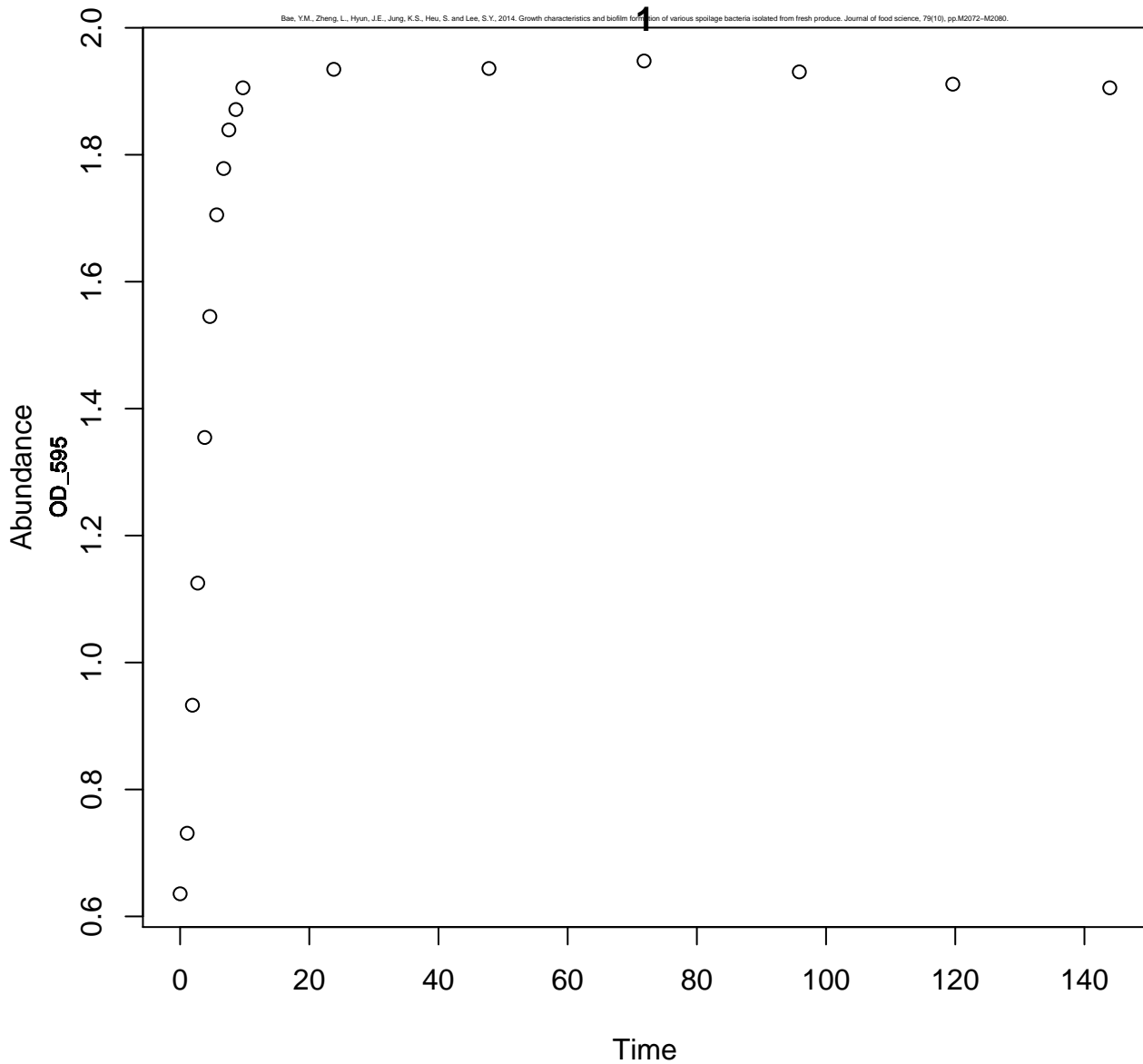
# Klebsiella.pneumonia..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



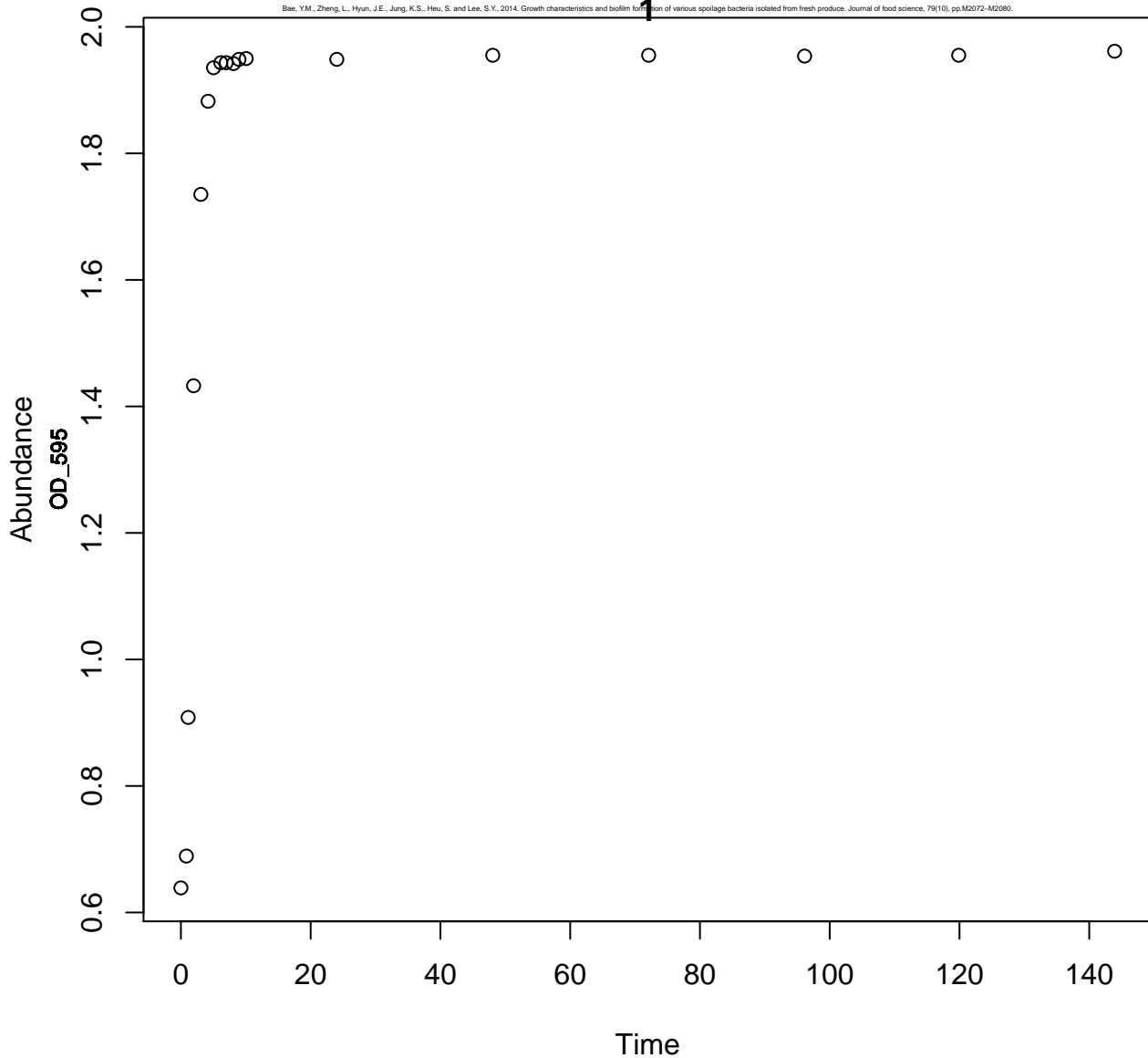
# Klebsiella.pneumonia..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.





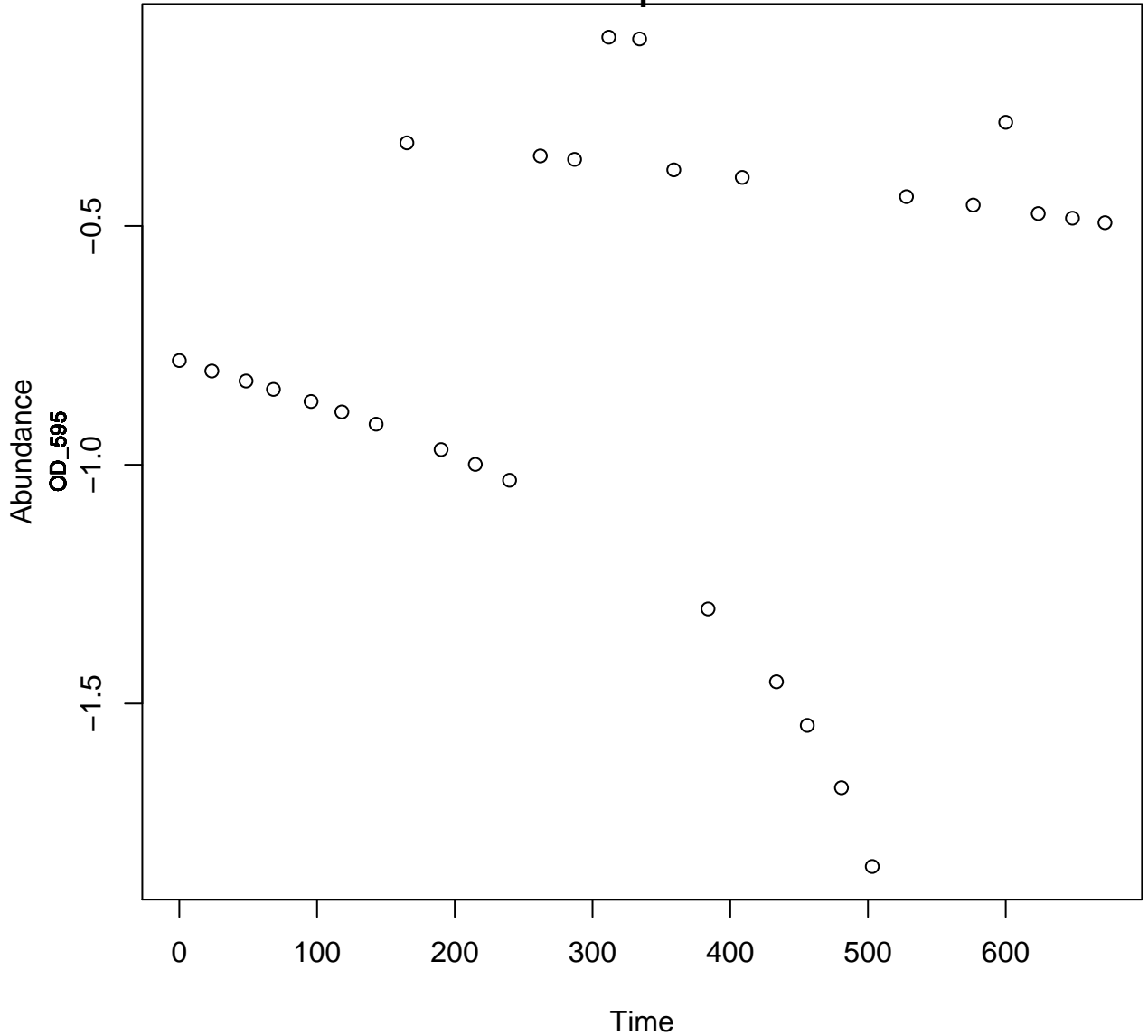
# Bacillus.pumilus..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



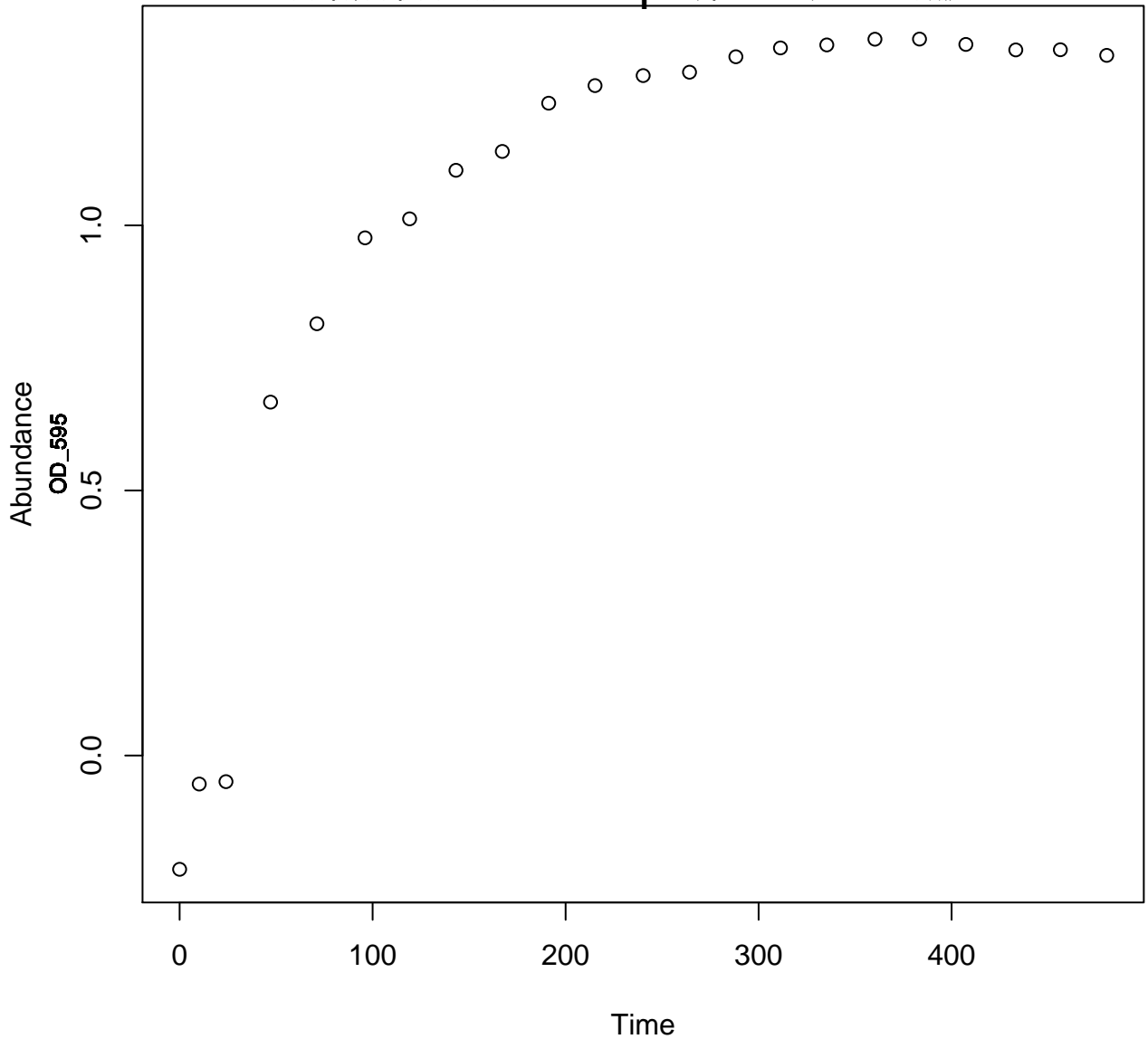
# Bacillus.pumilus..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



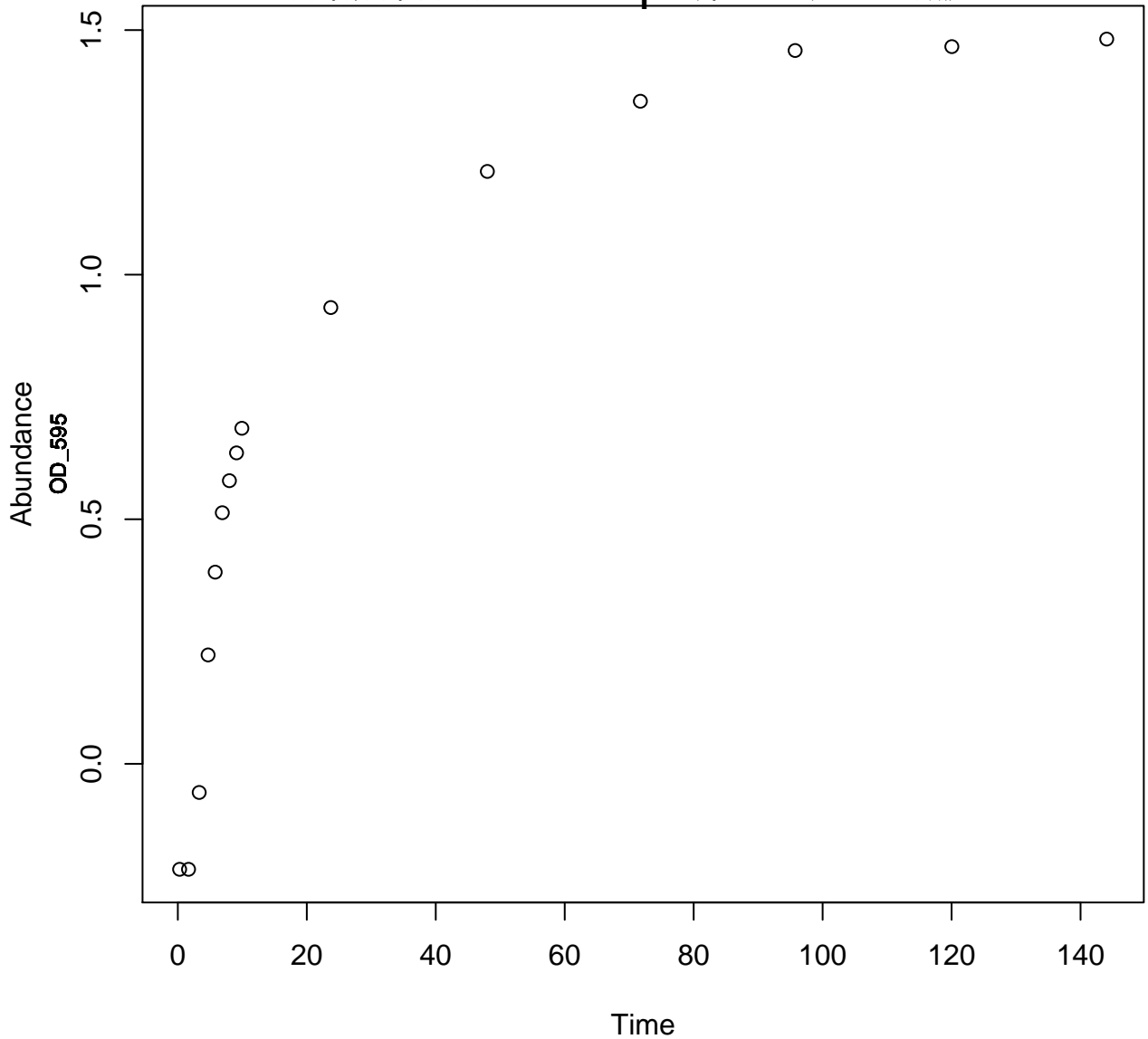
# Bacillus.pumilus..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



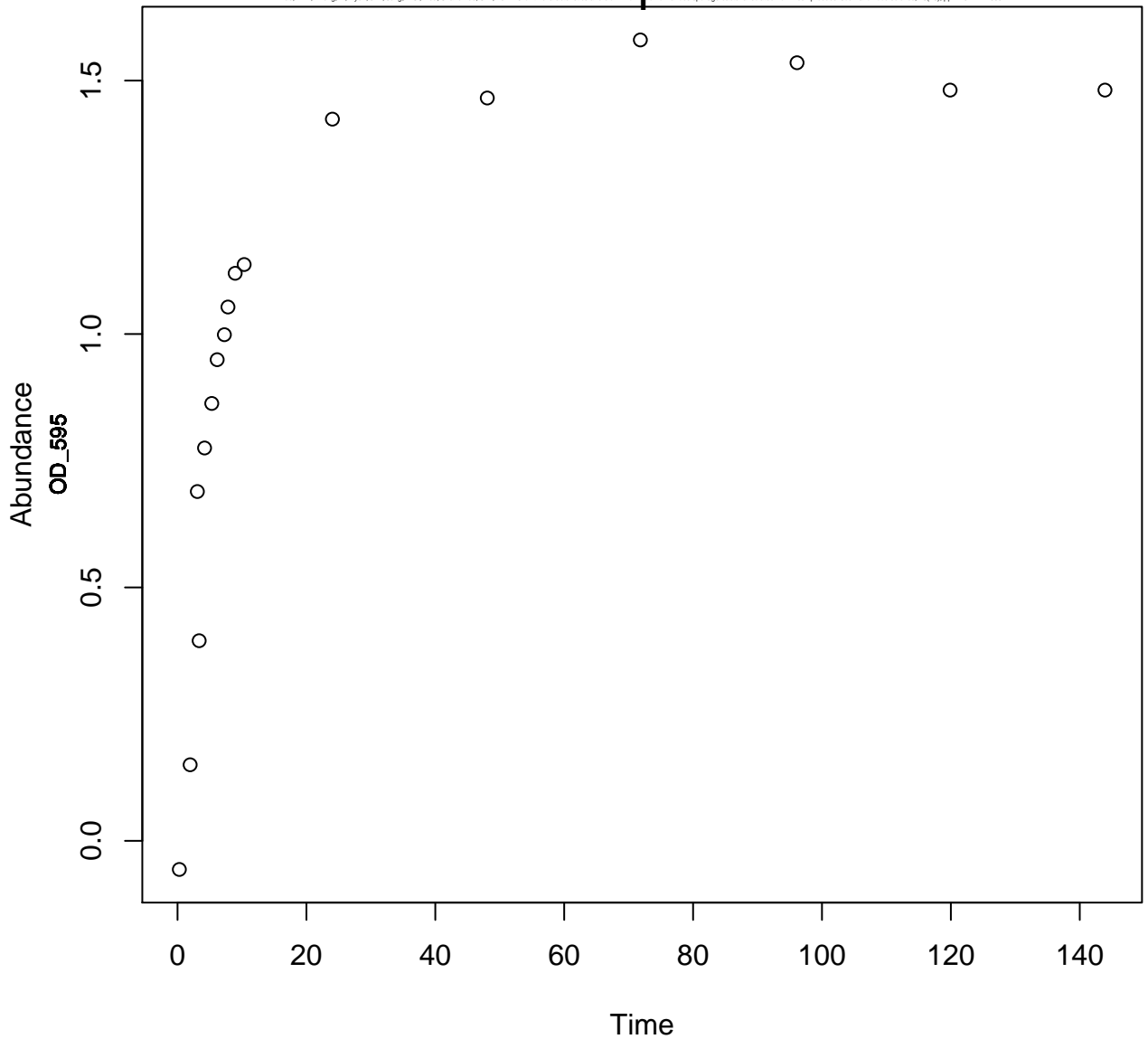
# Bacillus.pumilus..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



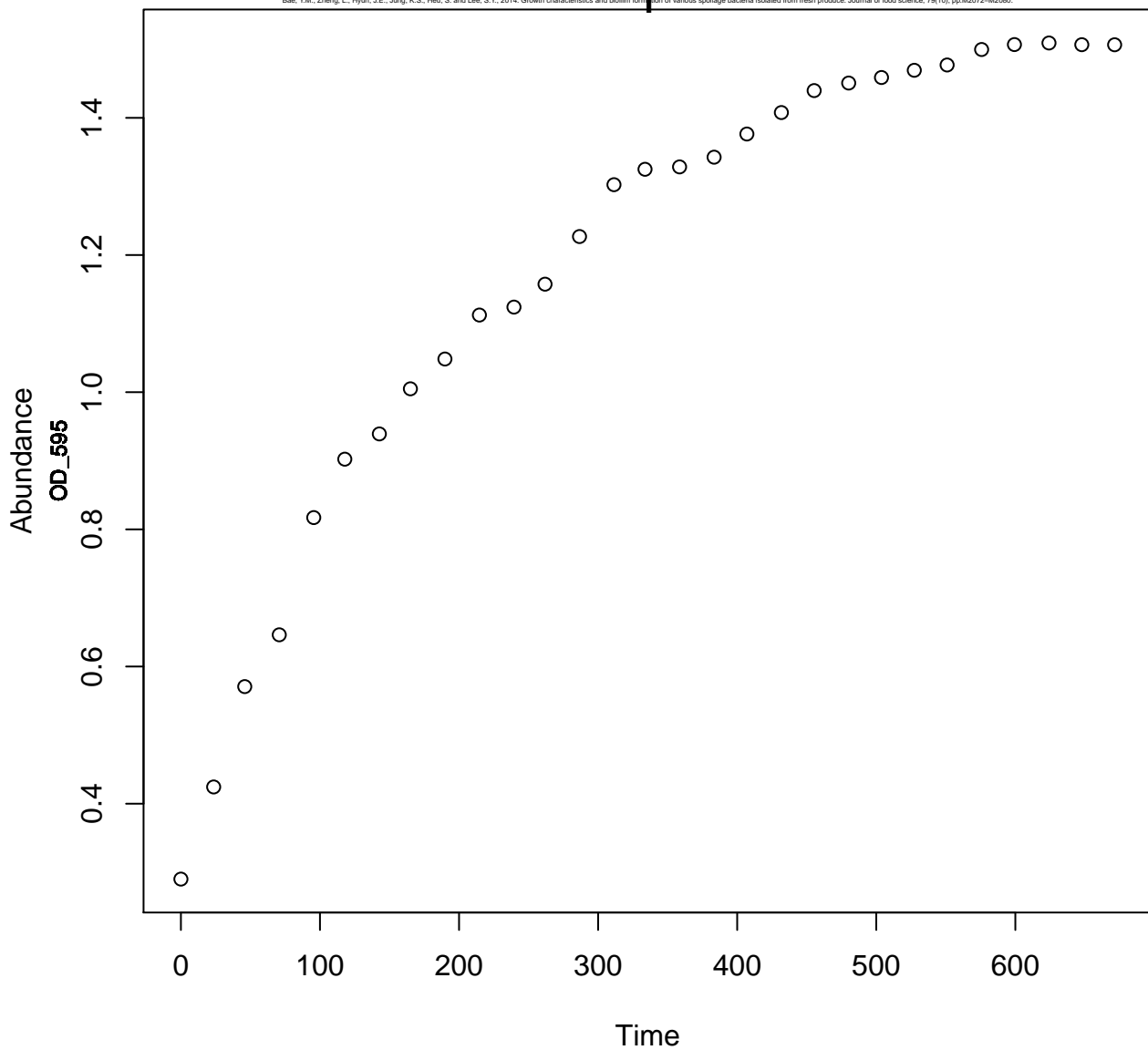
# Clavibacter.michiganensis..RDA.R.

TSB

5

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



# Clavibacter.michiganensis..RDA.R.

TSB

15

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

Abundance

OD\_595

1.5

1.0

0.5

0

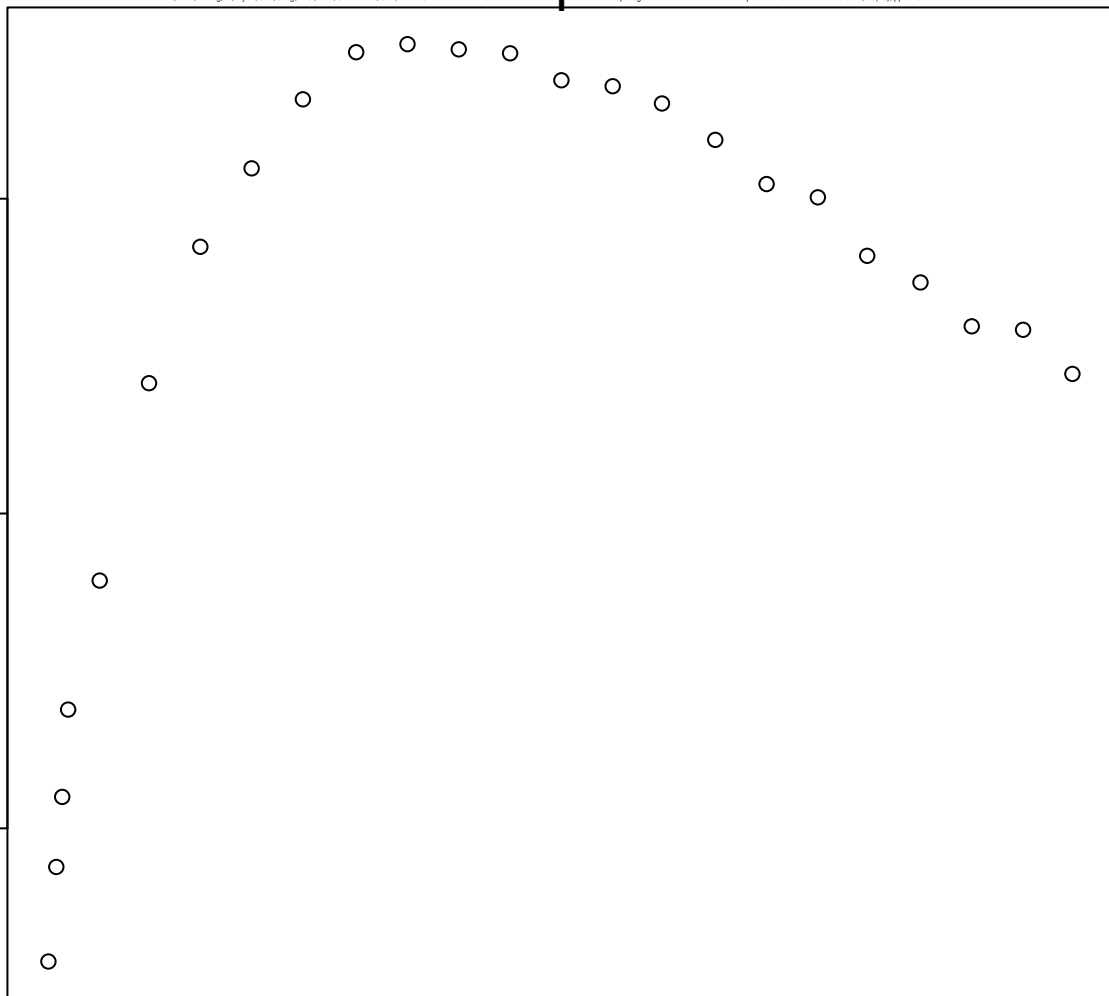
100

200

300

400

Time



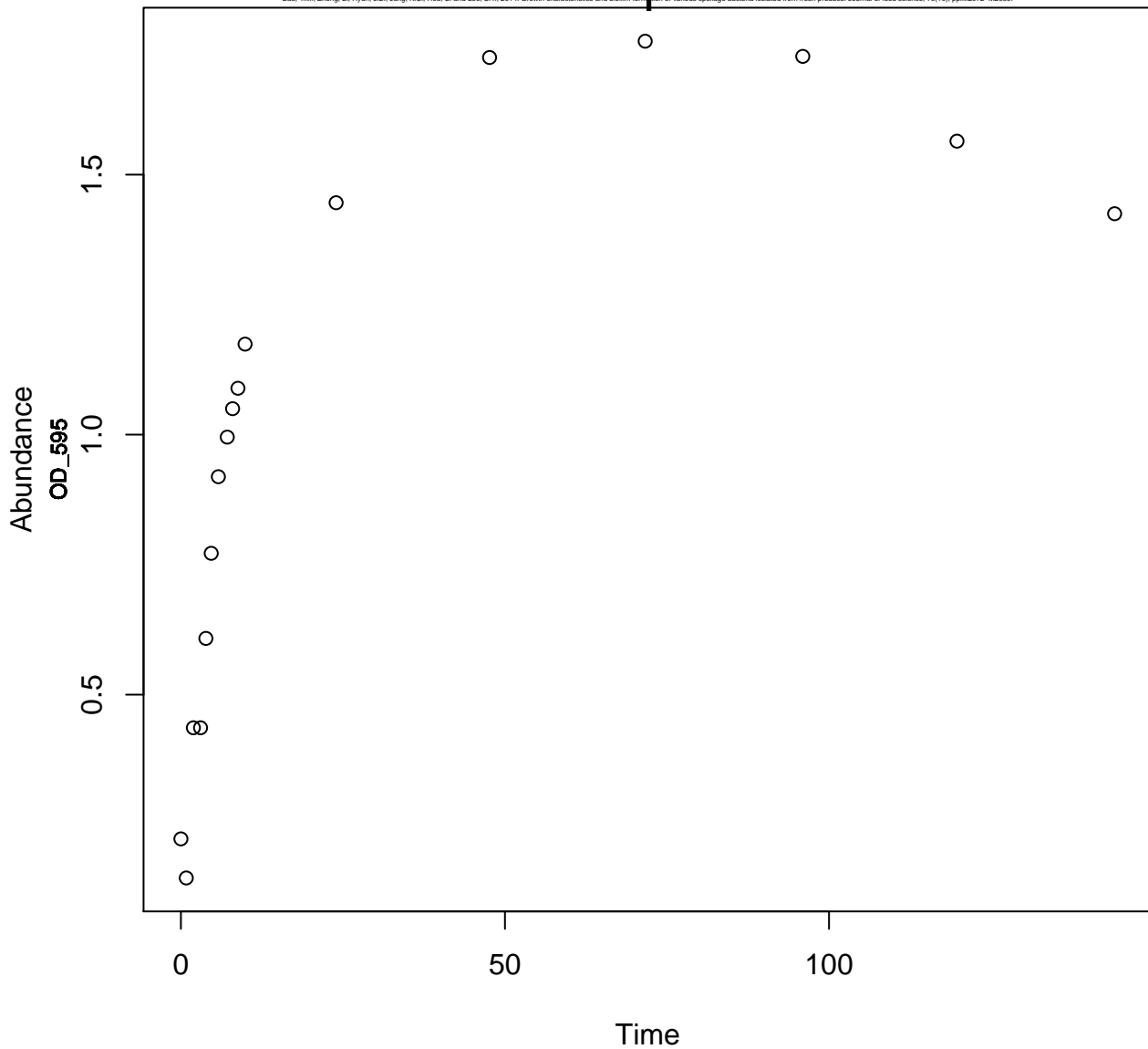
# Clavibacter.michiganensis..RDA.R.

TSB

25

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.



# Clavibacter.michiganensis..RDA.R.

TSB

35

1

Bae, Y.M., Zheng, L., Hyun, J.E., Jung, K.S., Heu, S. and Lee, S.Y., 2014. Growth characteristics and biofilm formation of various spoilage bacteria isolated from fresh produce. Journal of food science, 79(10), pp.M2072-M2080.

Abundance

OD\_595

1.5

1.0

0.5

0

20

40

60

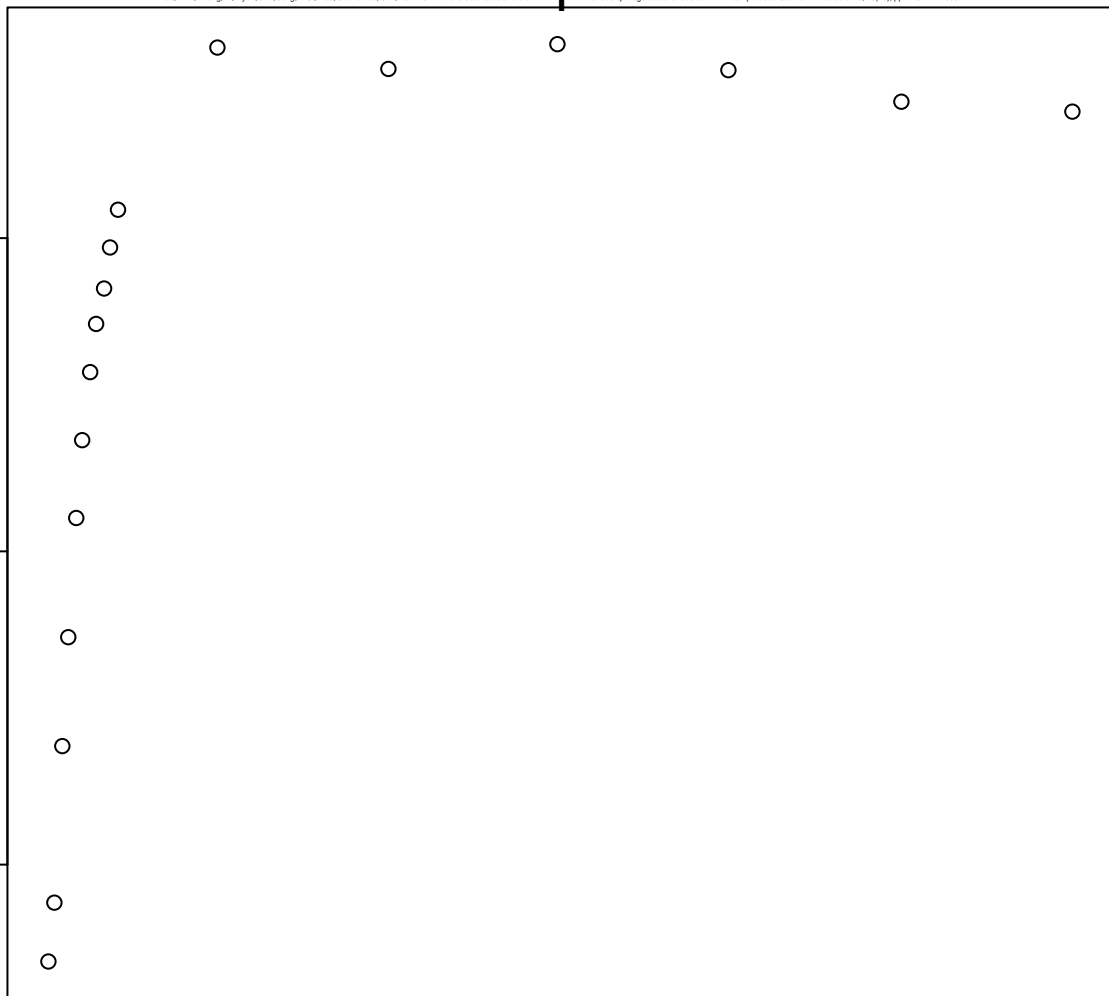
80

100

120

140

Time





# Tetraselmis tetrahele

ESAW

5

5

Bernhardt, J.R., Sunday, J.M. and O'Connor, M.I., 2018. Metabolic theory and the temperature-size rule explain the temperature dependence of population carrying capacity. *The American naturalist*, 192(6), pp.687-697.

Abundance

N

4.0

3.5

3.0

0

200

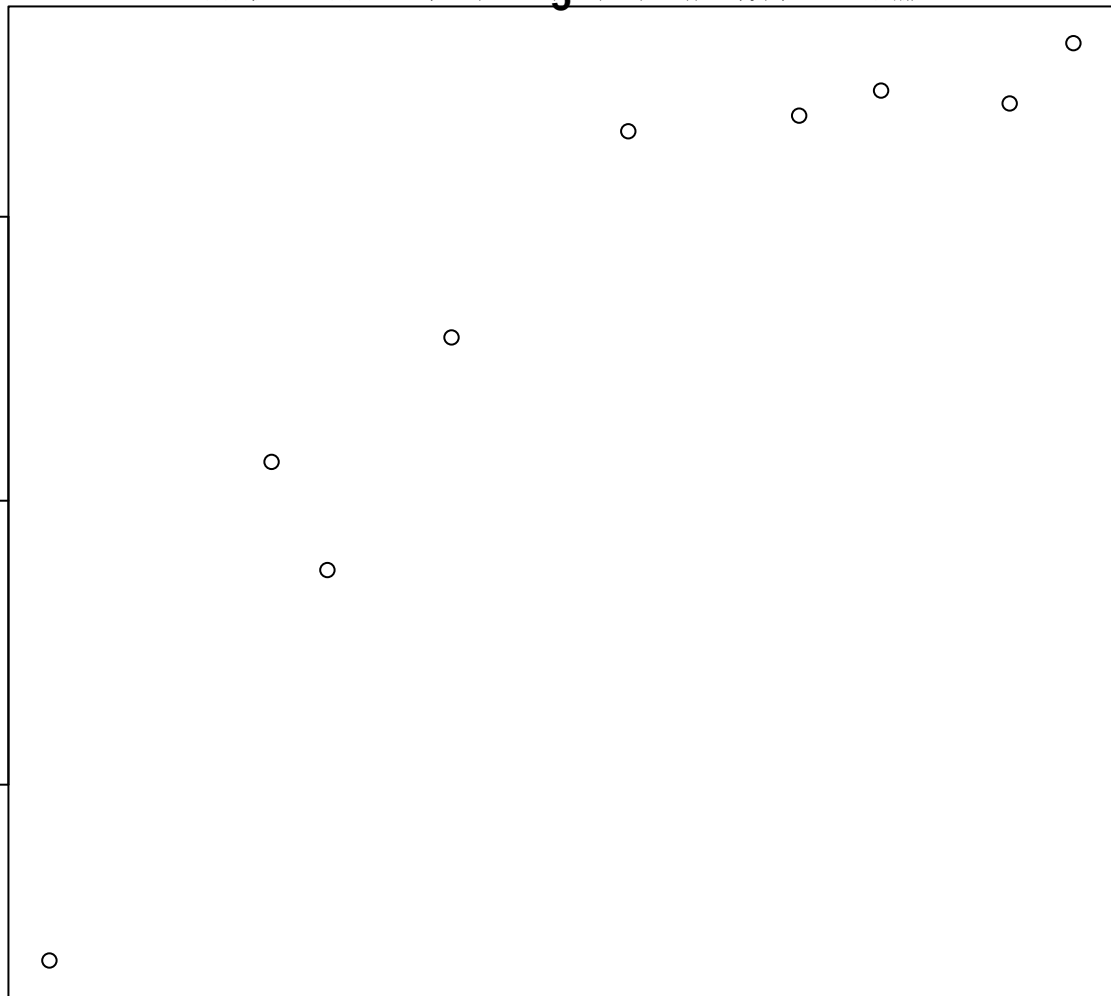
400

600

800

1000

Time



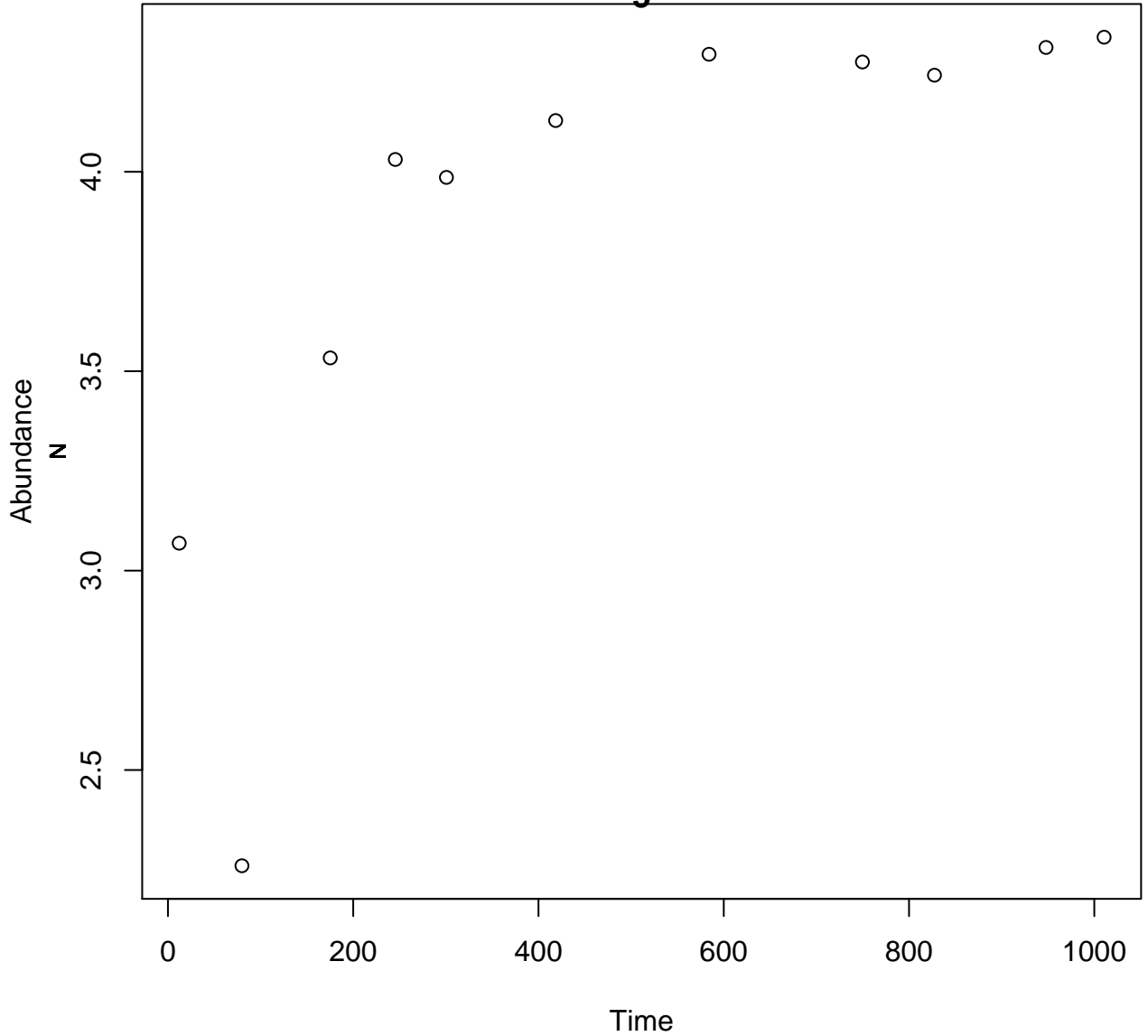
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ESAW

8

5

Bernhardt, J.R., Sunday, J.M. and O'Connor, M.L., 2018. Metabolic theory and the temperature-size rule explain the temperature dependence of population carrying capacity. *The American naturalist*, 192(6), pp.687-697.



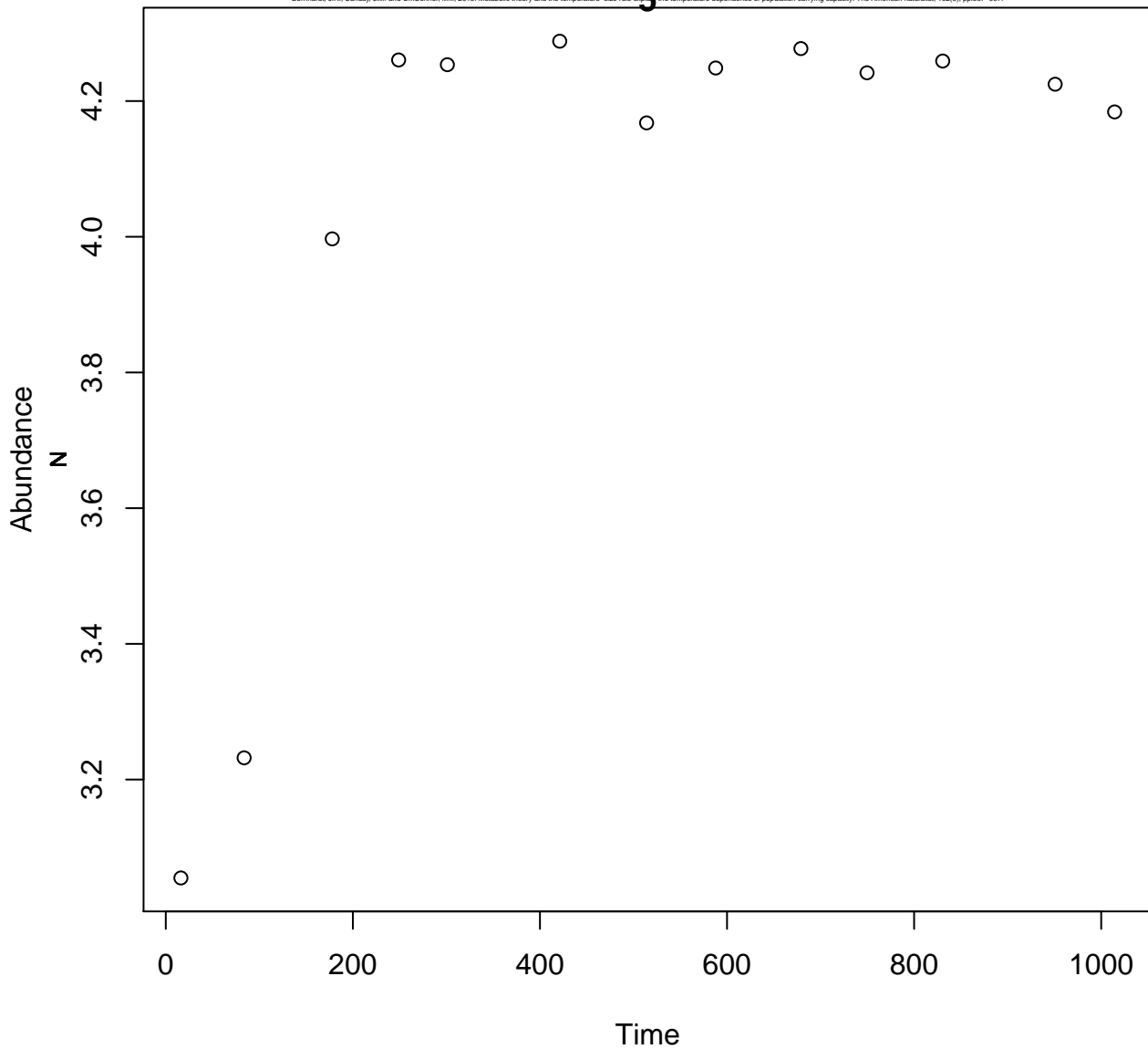
# Tetraselmis tetrahele

ESAW

16

5

Bernhardt, J.R., Sunday, J.M. and O'Connor, M.L., 2018. Metabolic theory and the temperature-size rule explain the temperature dependence of population carrying capacity. *The American naturalist*, 192(6), pp.687-697.



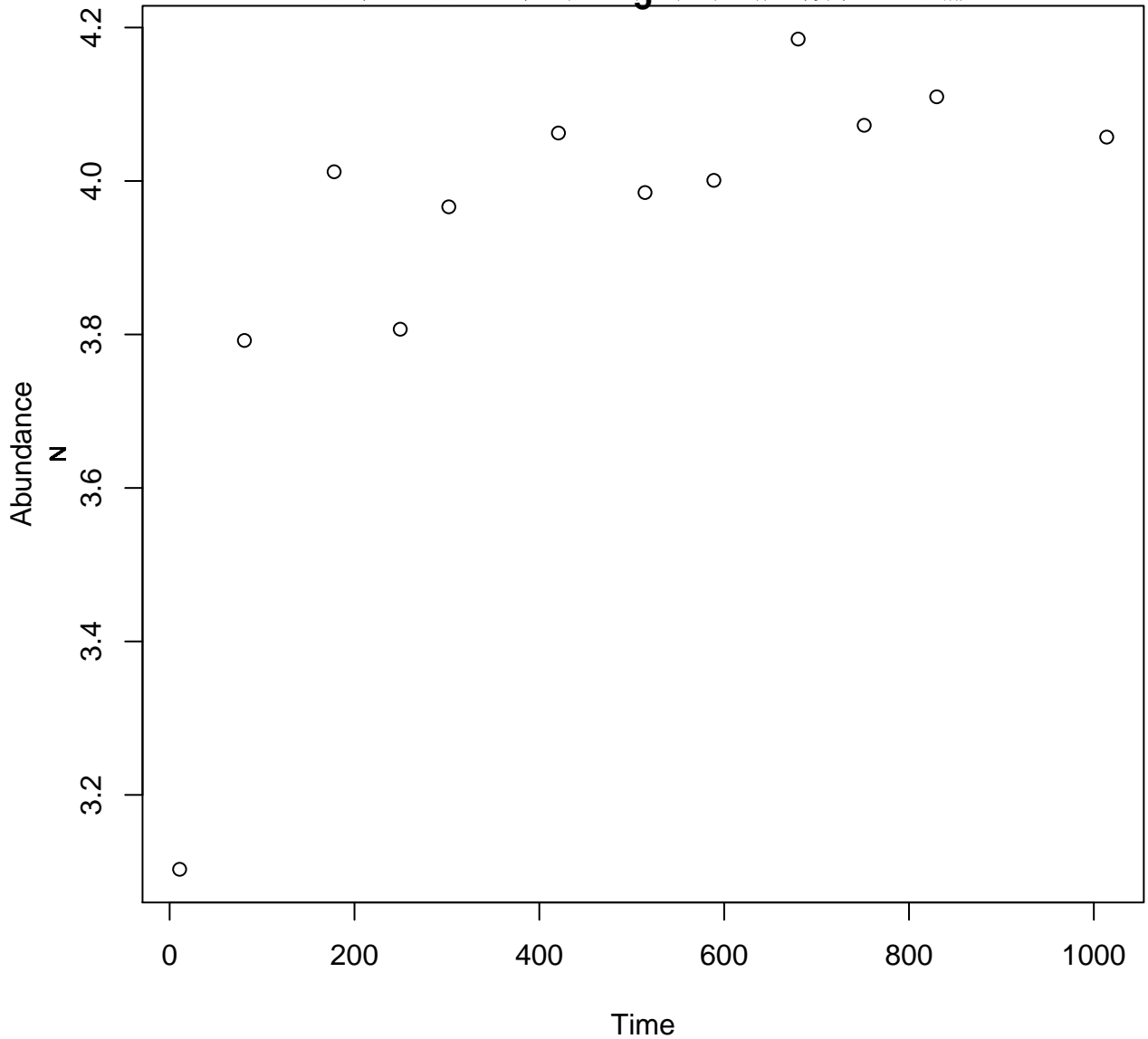
# Tetraselmis tetrahele

ESAW

25

5

Bernhardt, J.R., Sunday, J.M. and O'Connor, M.L., 2018. Metabolic theory and the temperature-size rule explain the temperature dependence of population carrying capacity. *The American naturalist*, 192(6), pp.687-697.



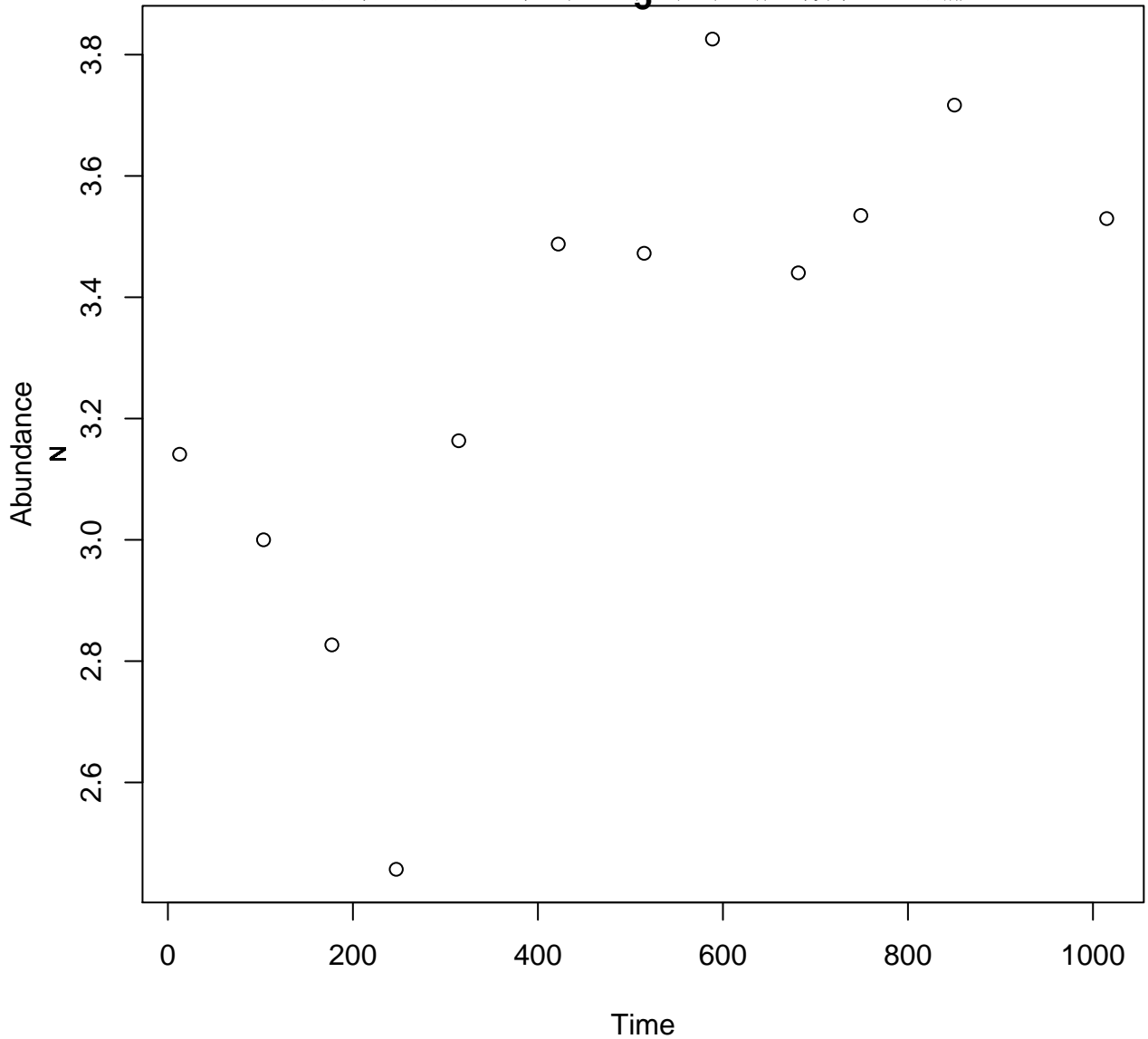
# Tetraselmis tetrahele

ESAW

32

5

Bernhardt, J.R., Sunday, J.M. and O'Connor, M.L., 2018. Metabolic theory and the temperature-size rule explain the temperature dependence of population carrying capacity. *The American naturalist*, 192(6), pp.687-697.



# Staphylococcus spp. Raw Chicken Breast

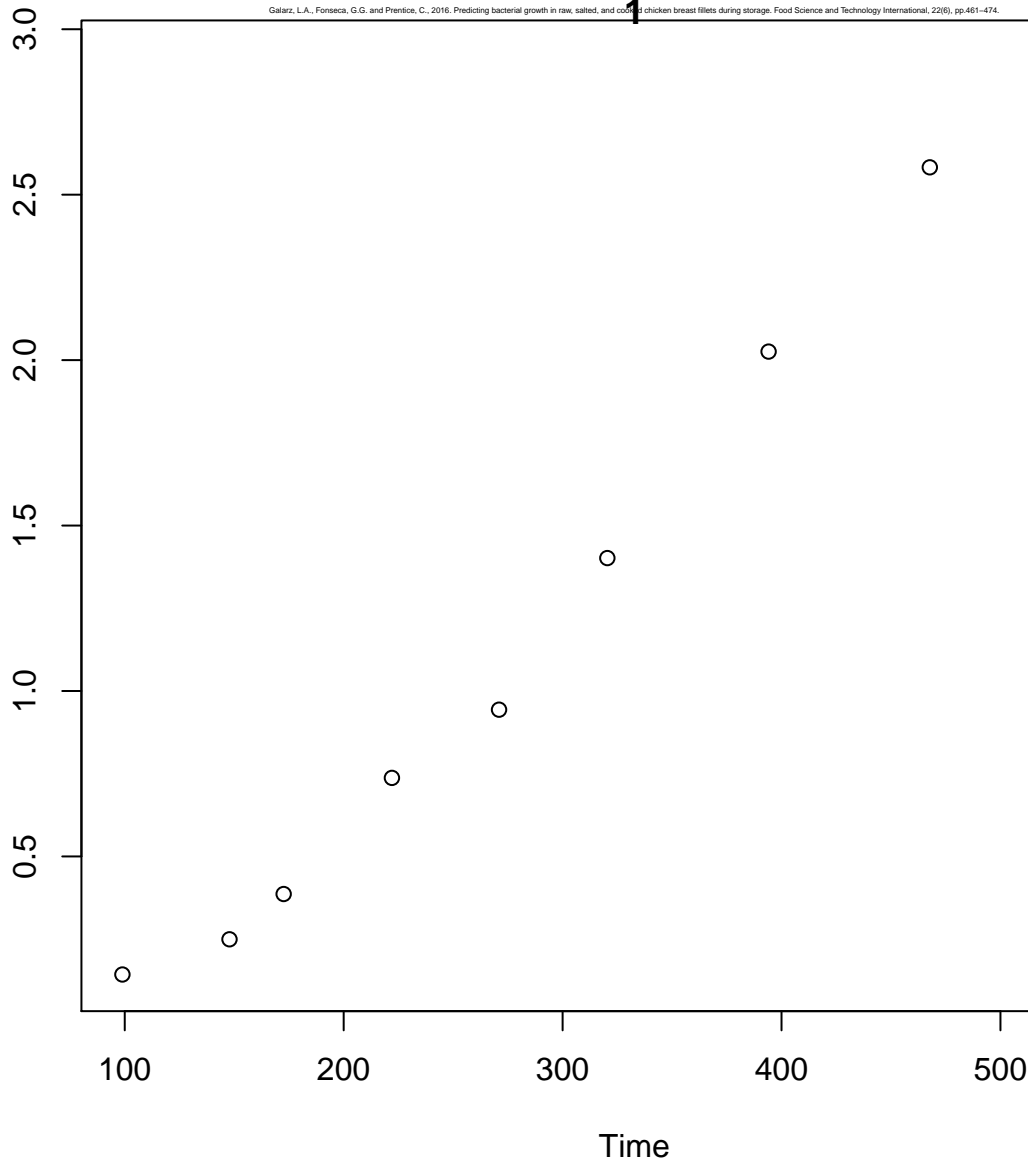
2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

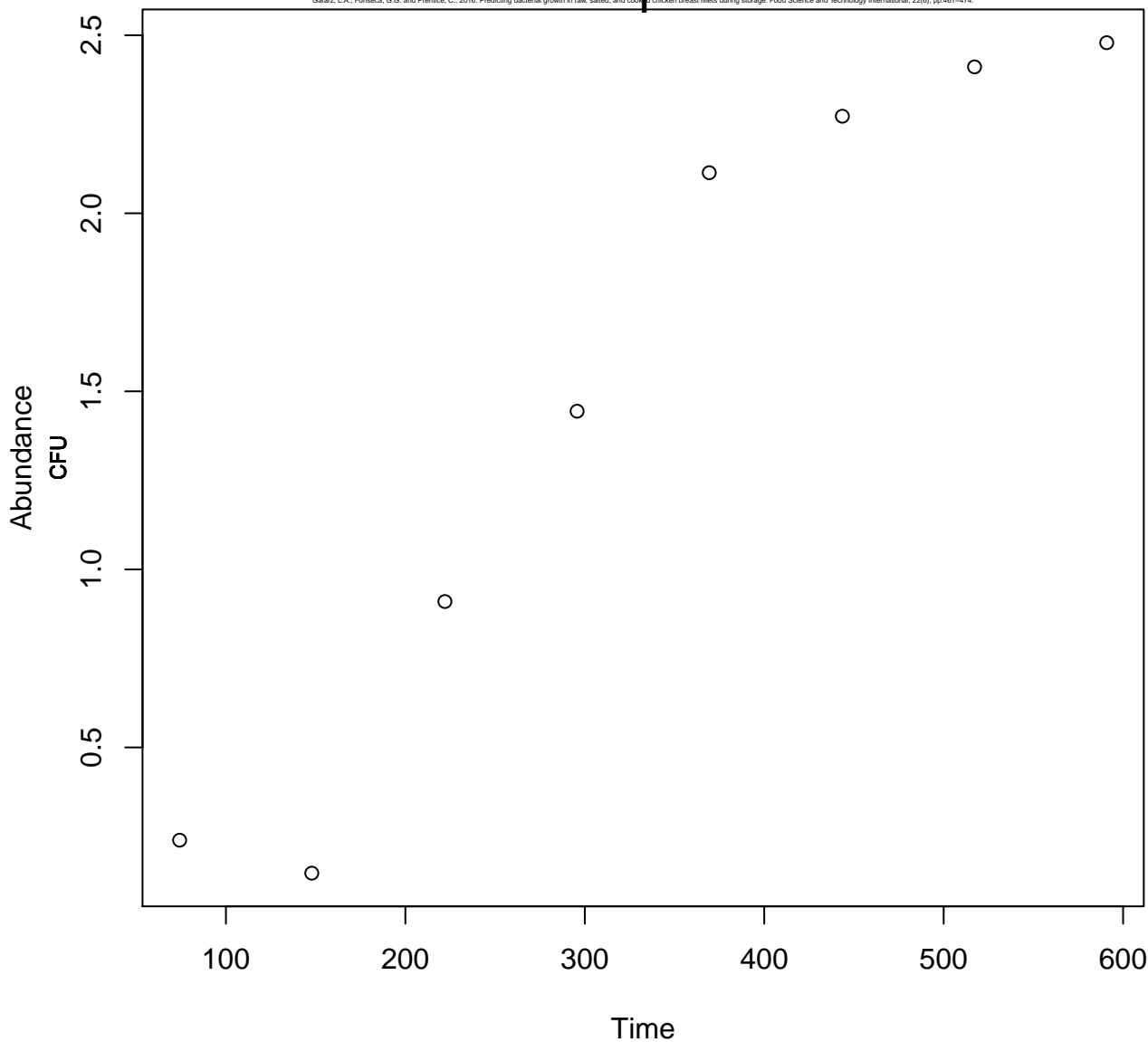


# Staphylococcus spp. Raw Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.

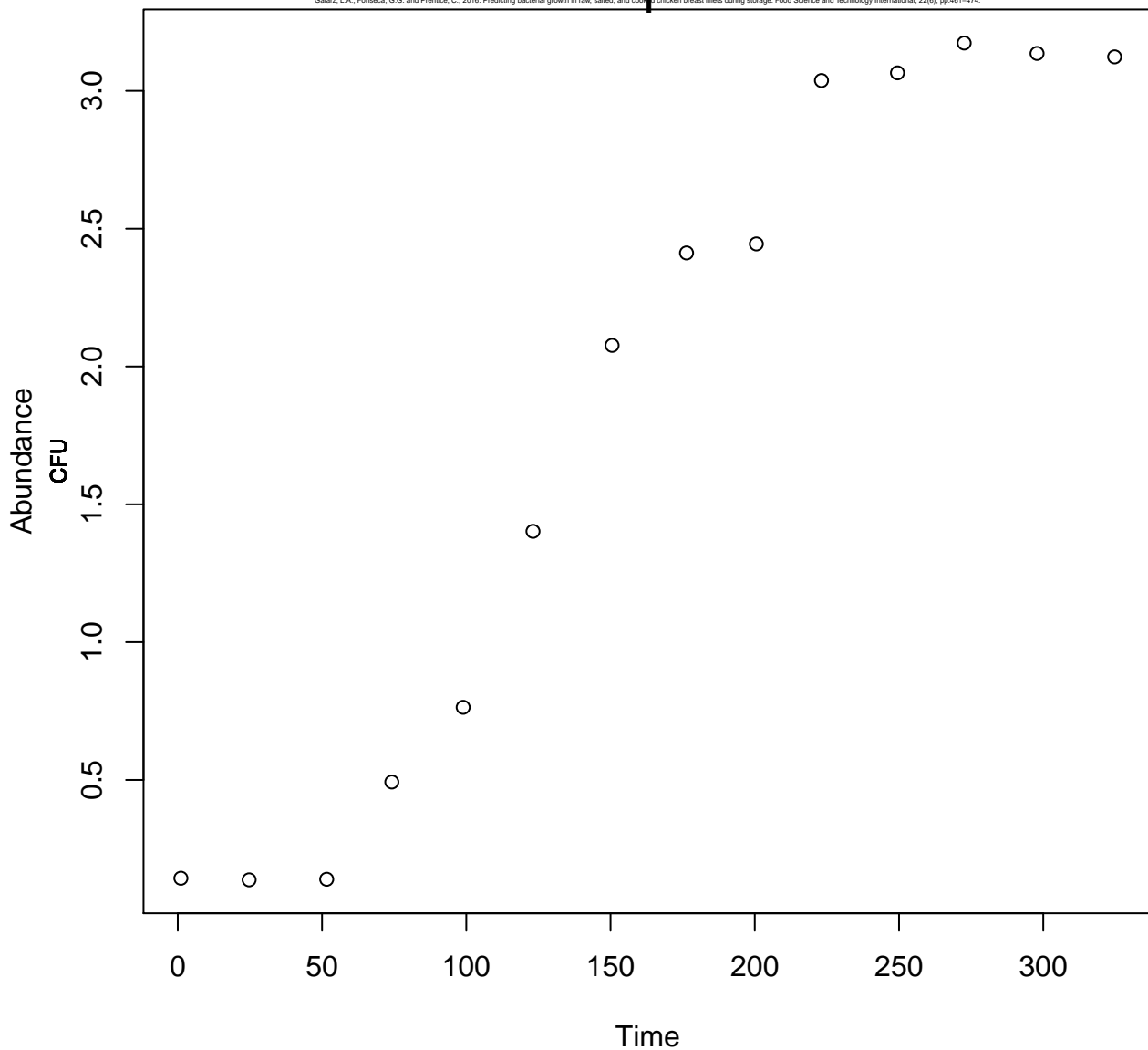


# Staphylococcus spp. Raw Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



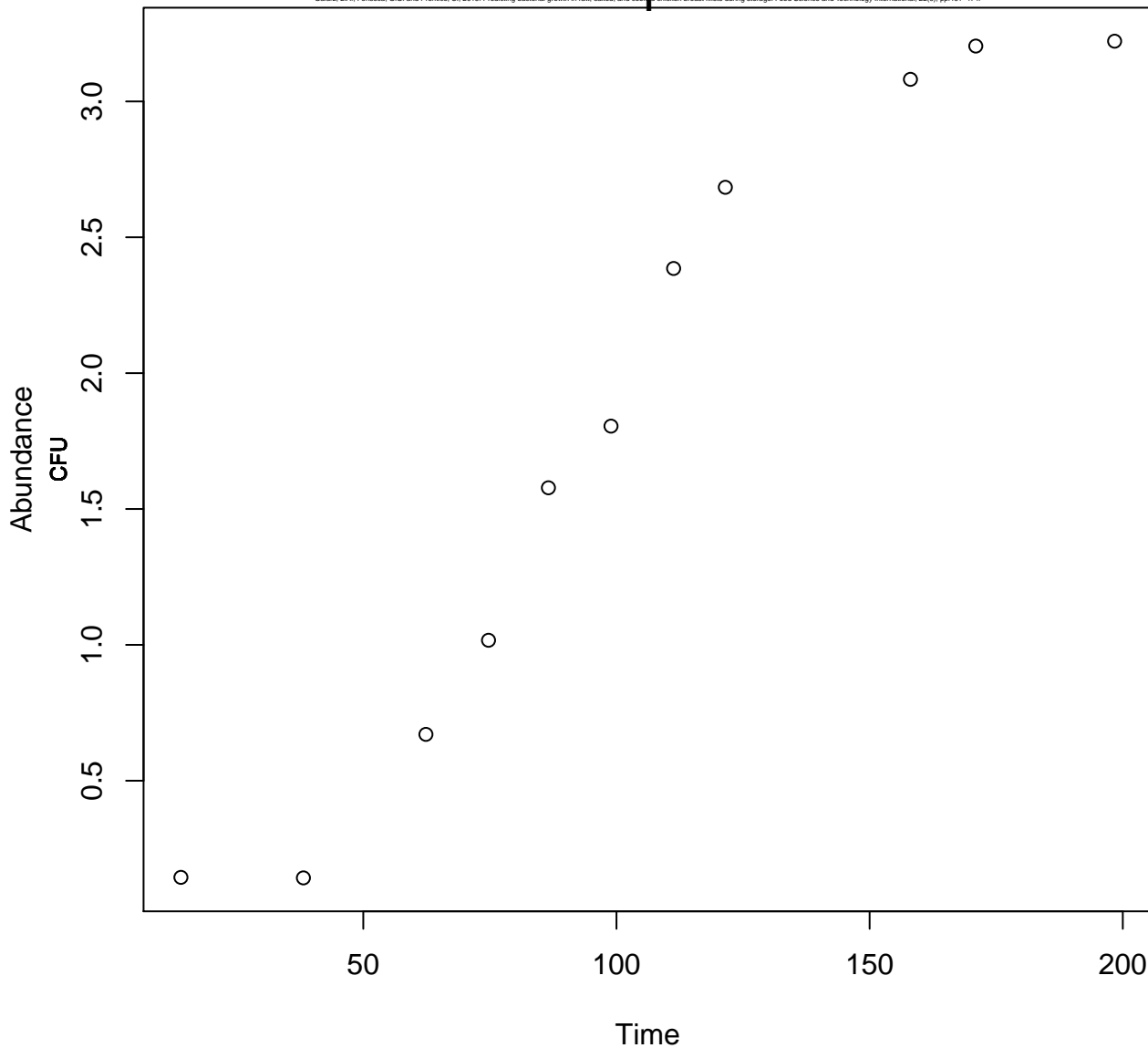


# Staphylococcus spp. Raw Chicken Breast

10

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Staphylococcus spp. Raw Chicken Breast

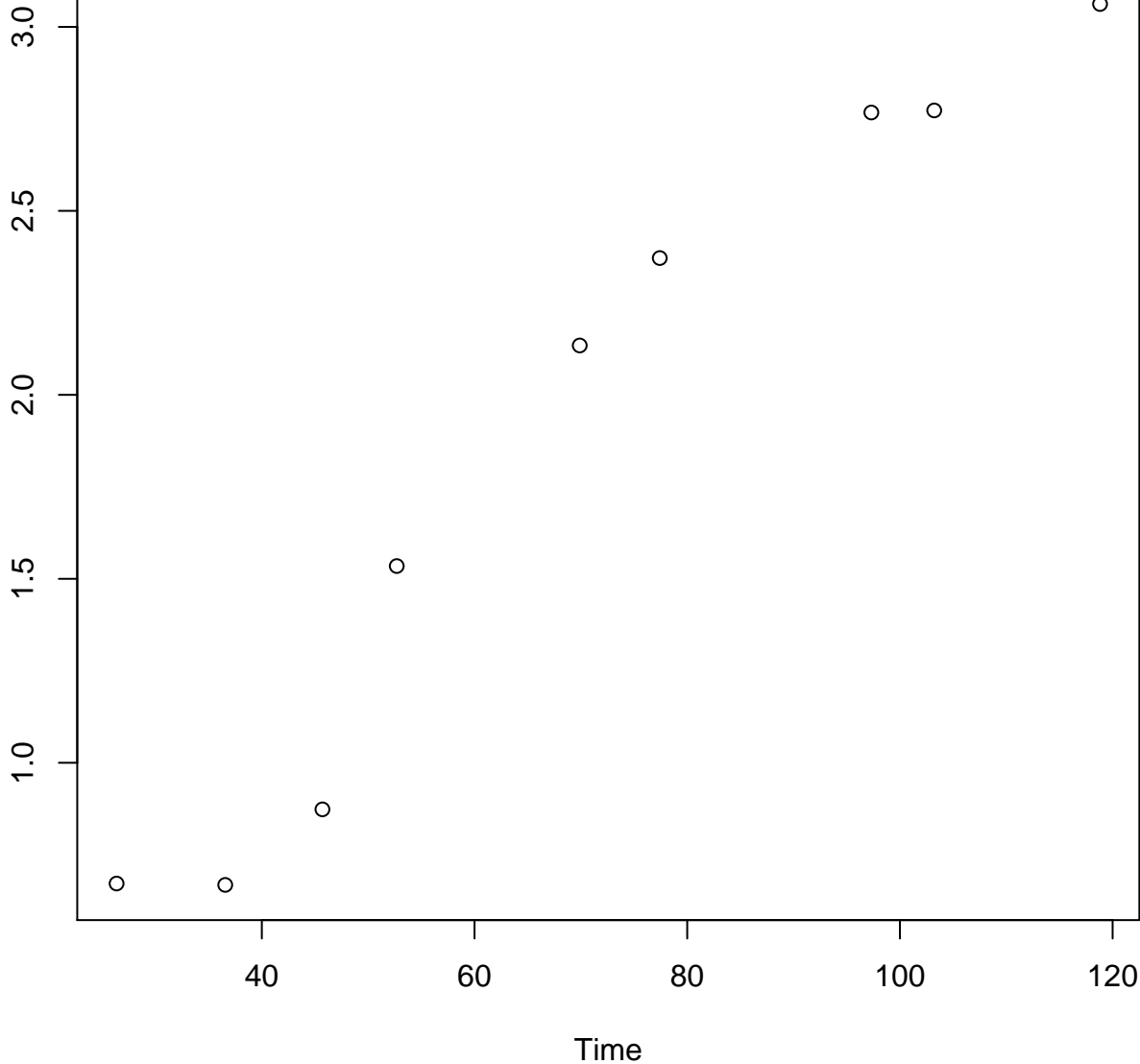
15

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

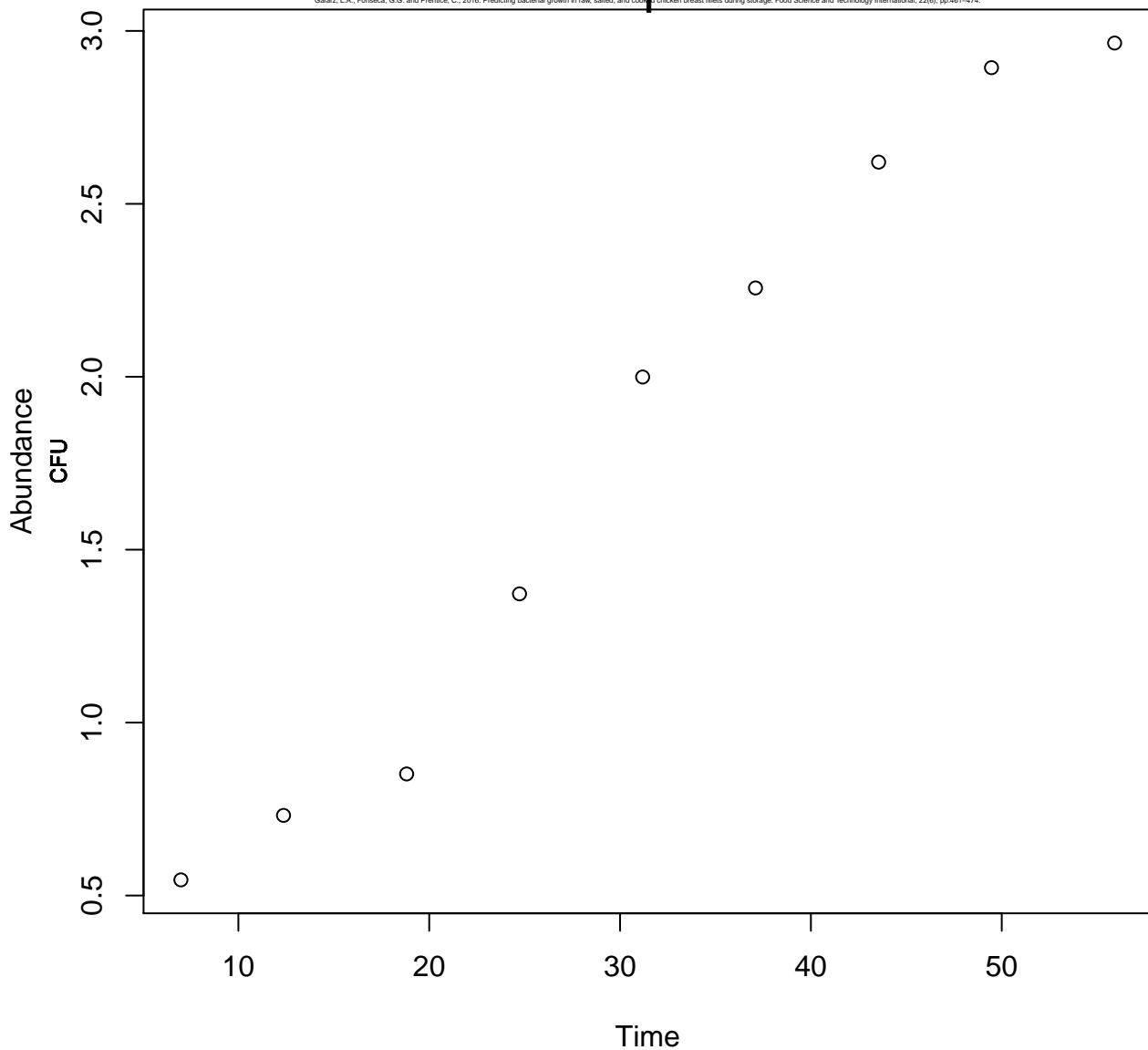


# Staphylococcus spp. Raw Chicken Breast

20

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.

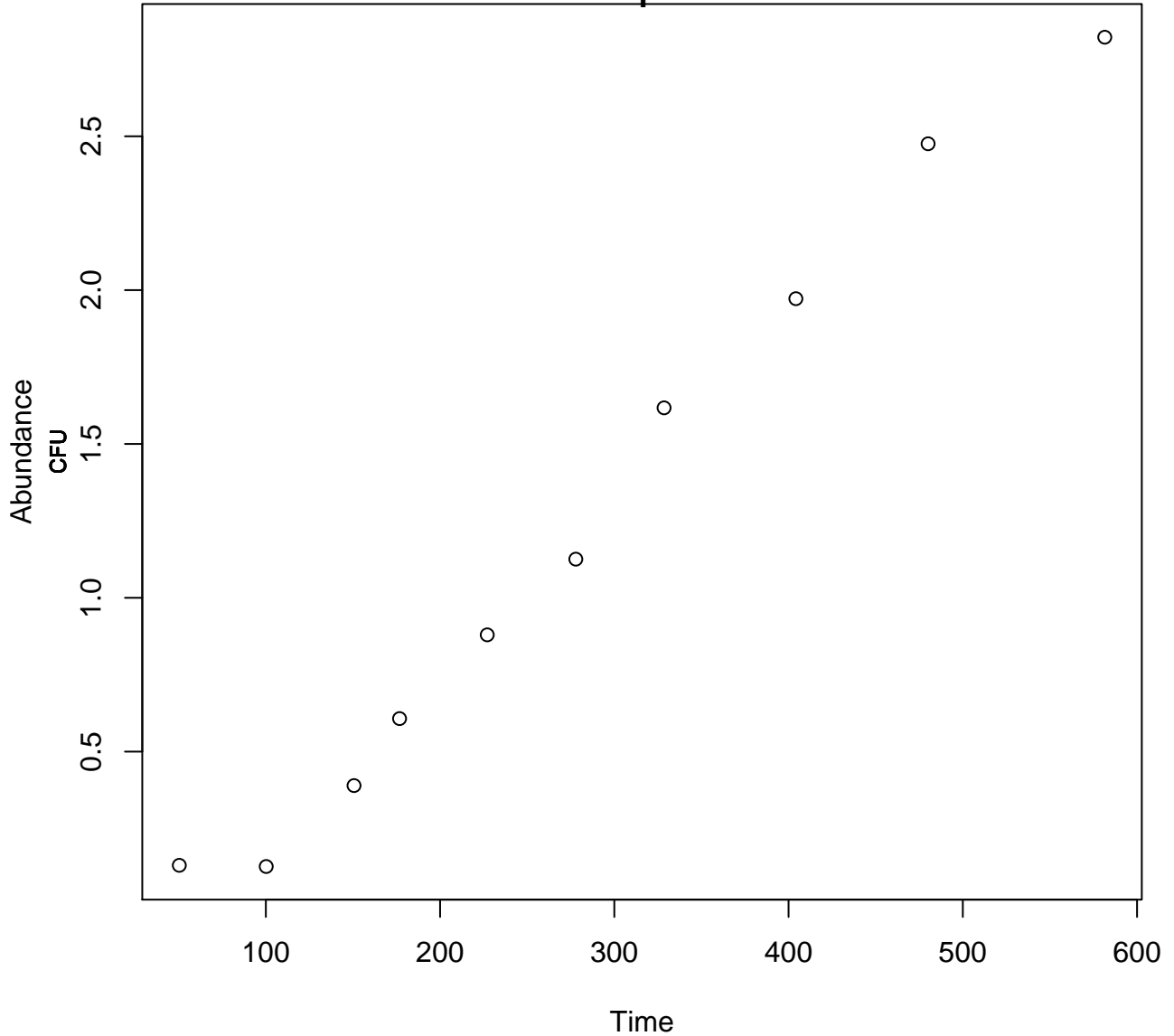


# Staphylococcus spp. Salted Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

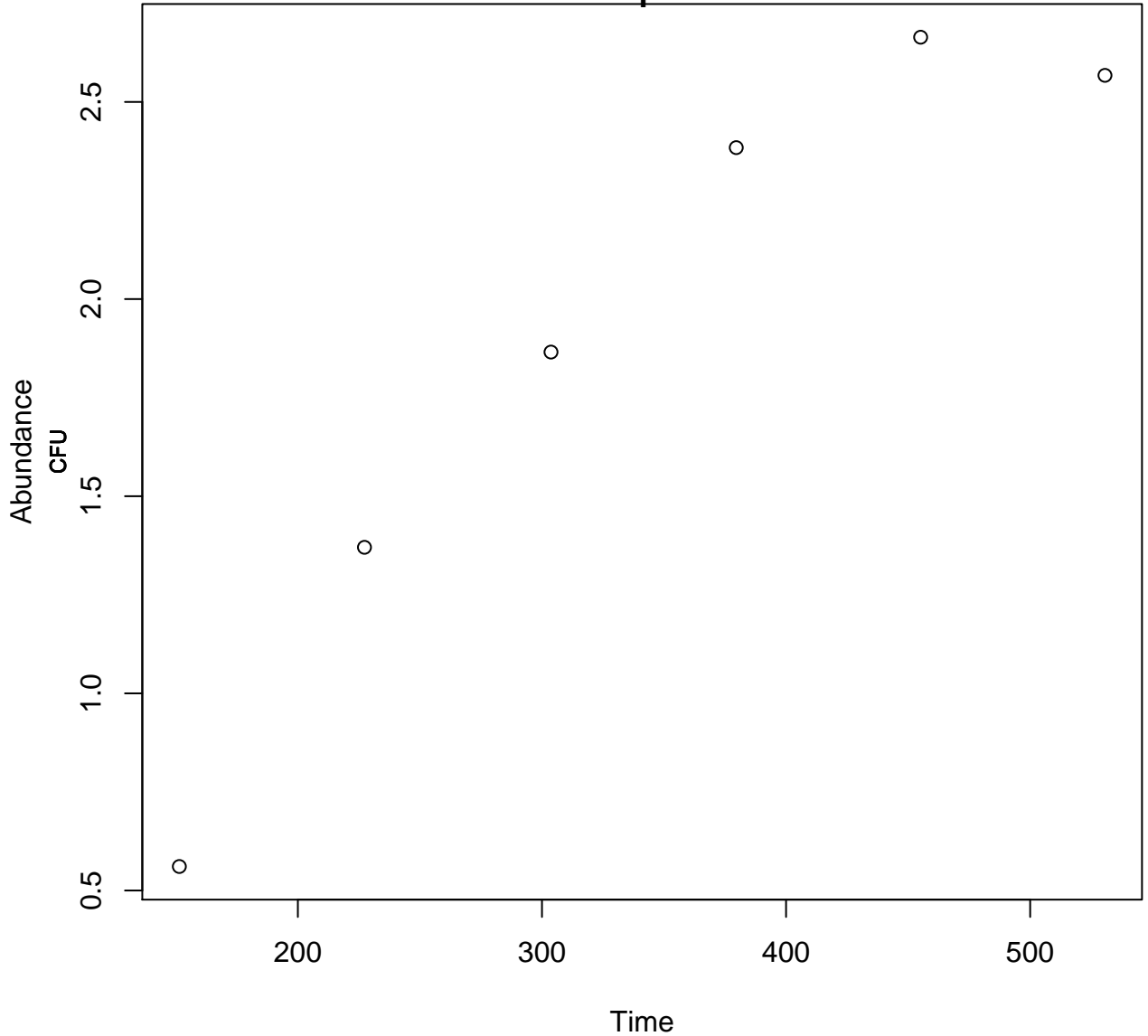


# Staphylococcus spp. Salted Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

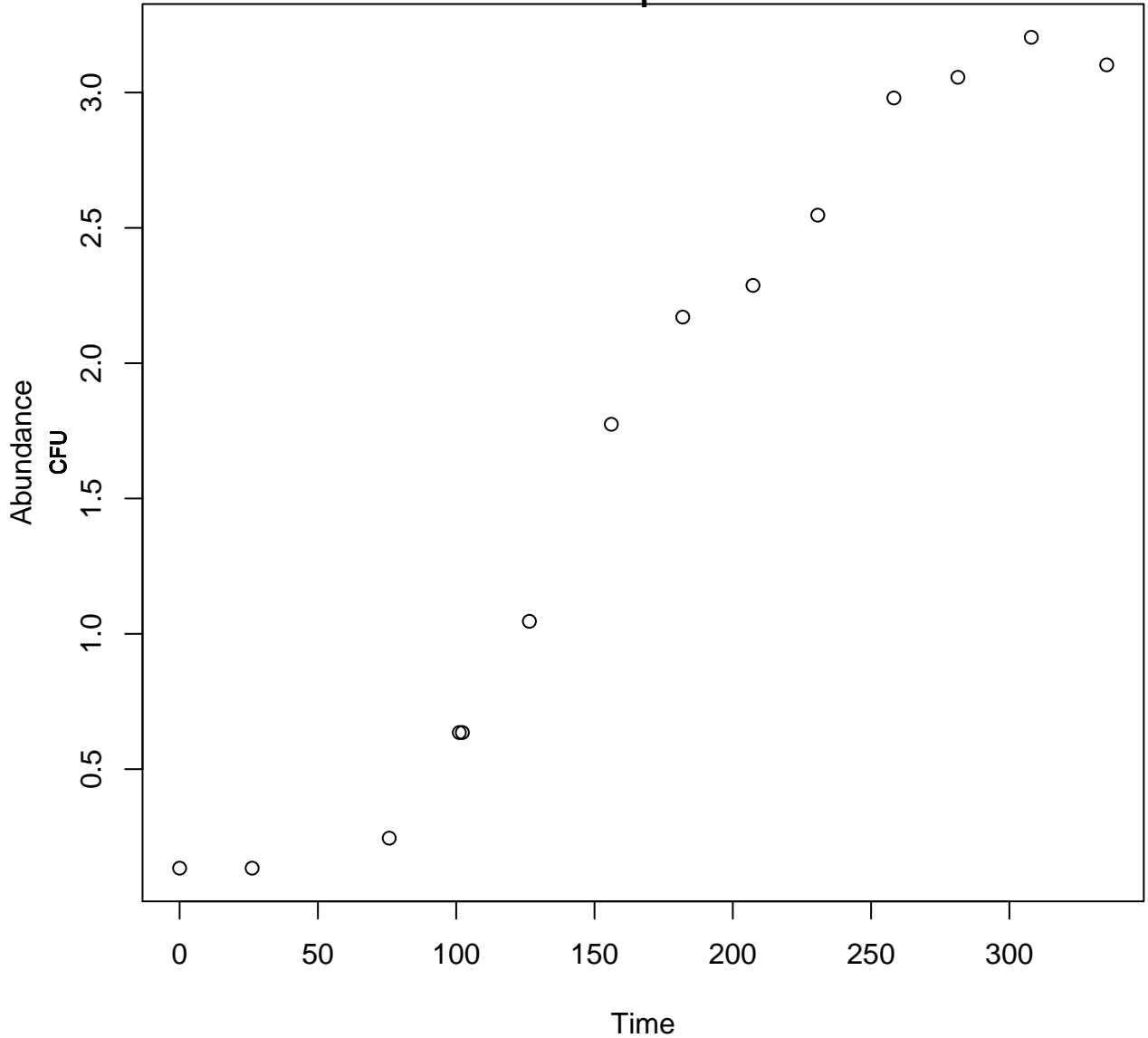


# Staphylococcus spp. Salted Chicken Breast

7

1

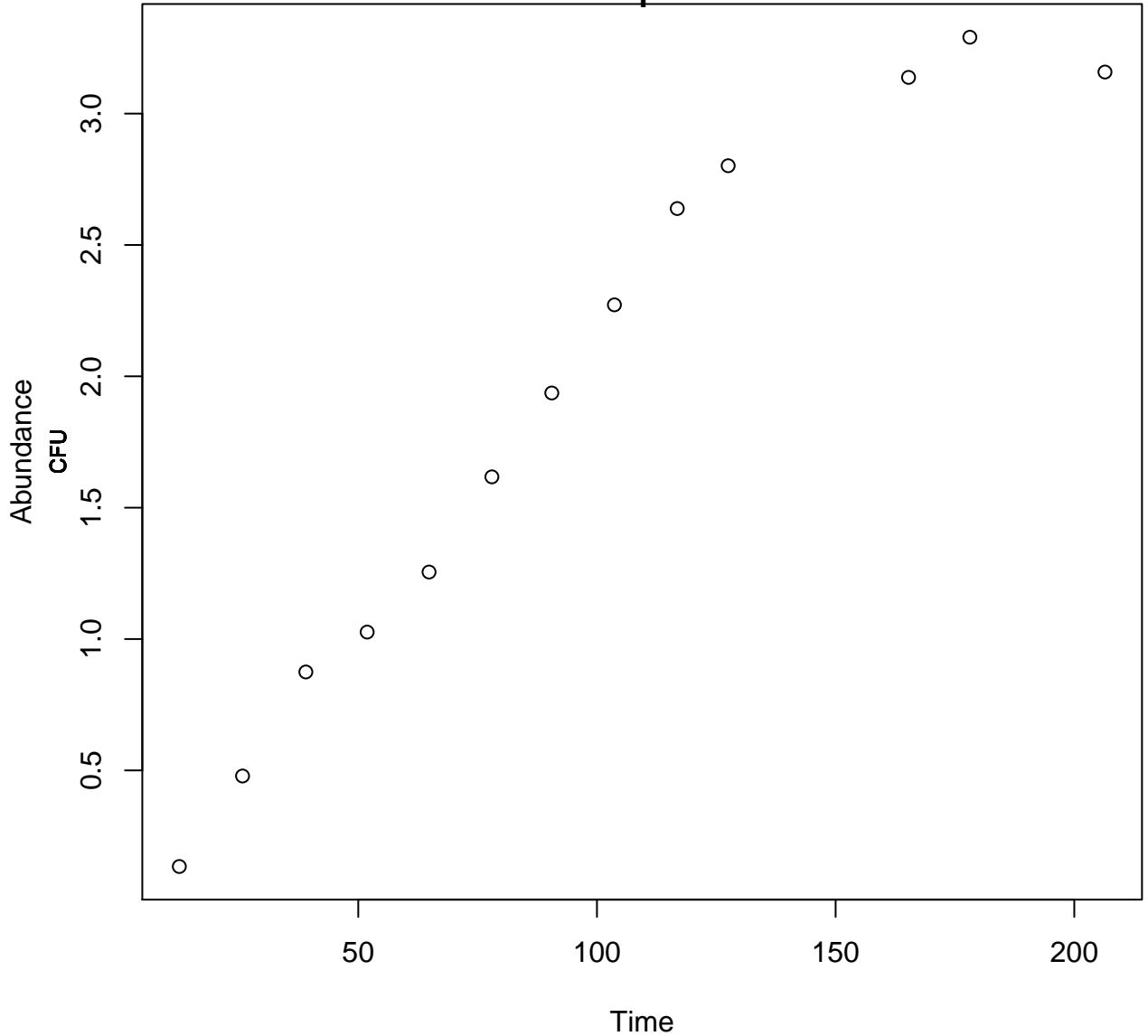
Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Staphylococcus spp. Salted Chicken Breast

10  
1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

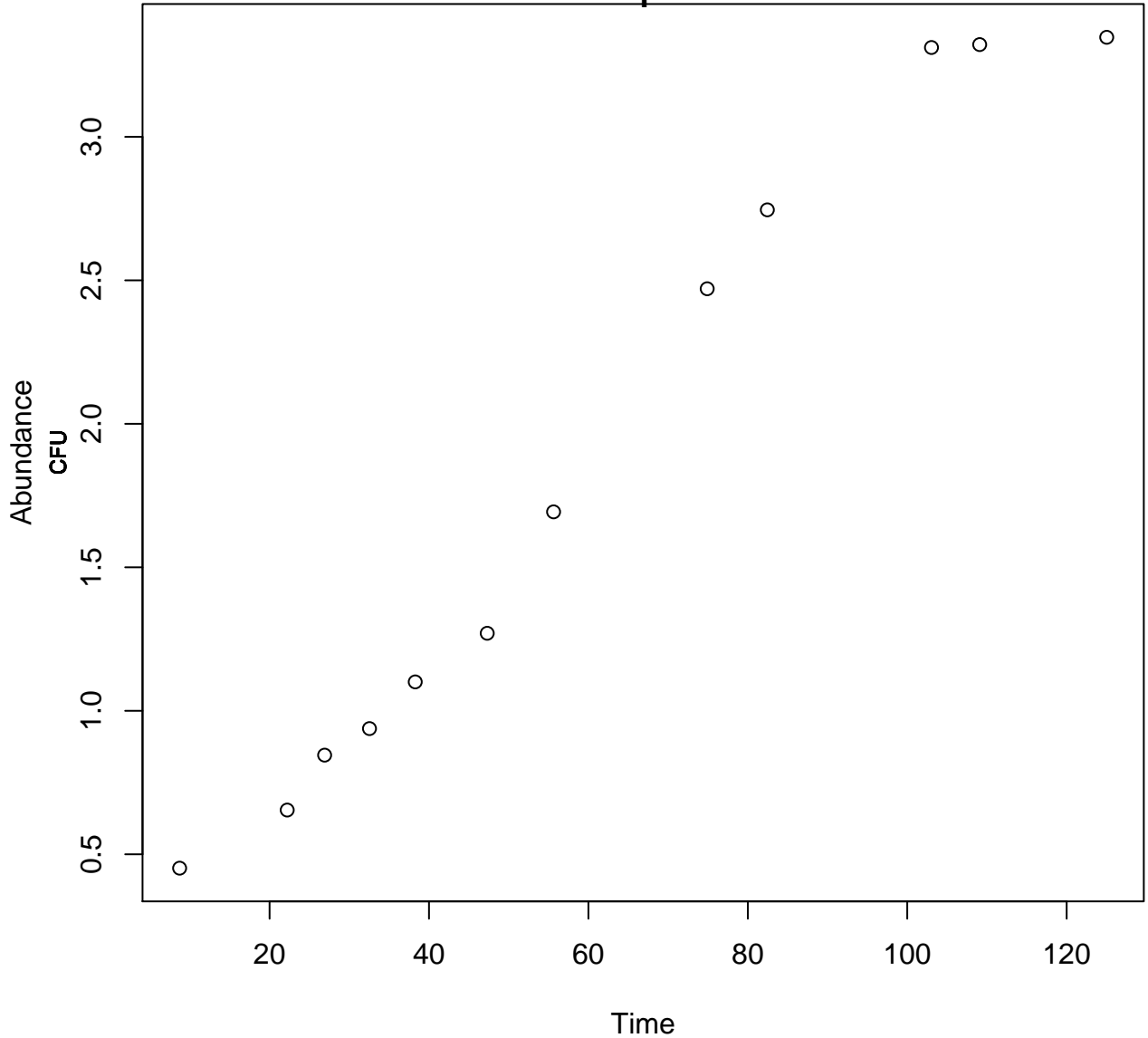


# Staphylococcus spp. Salted Chicken Breast

15

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.





# Staphylococcus spp. Salted Chicken Breast

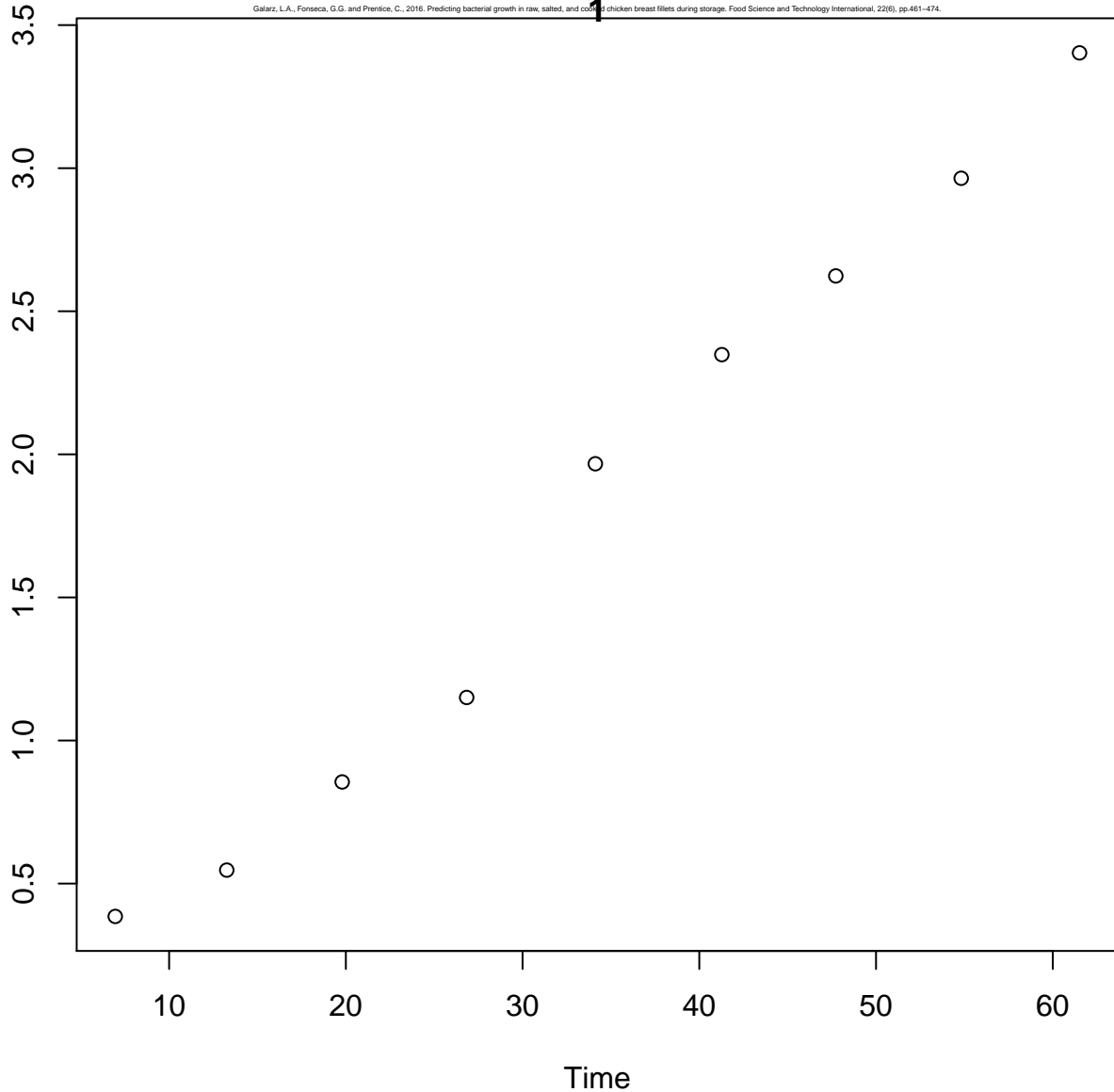
20

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

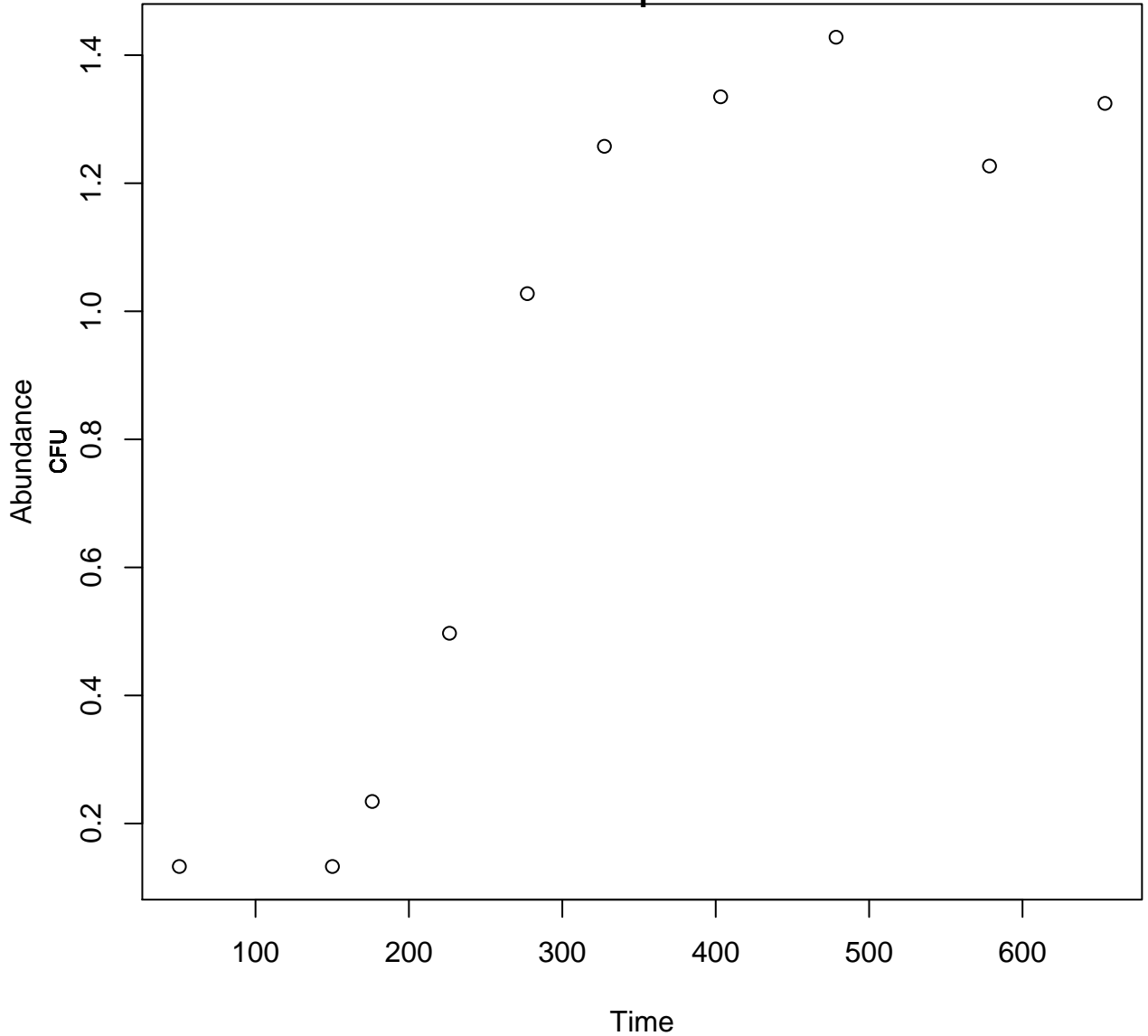


# Staphylococcus spp. Cooked Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

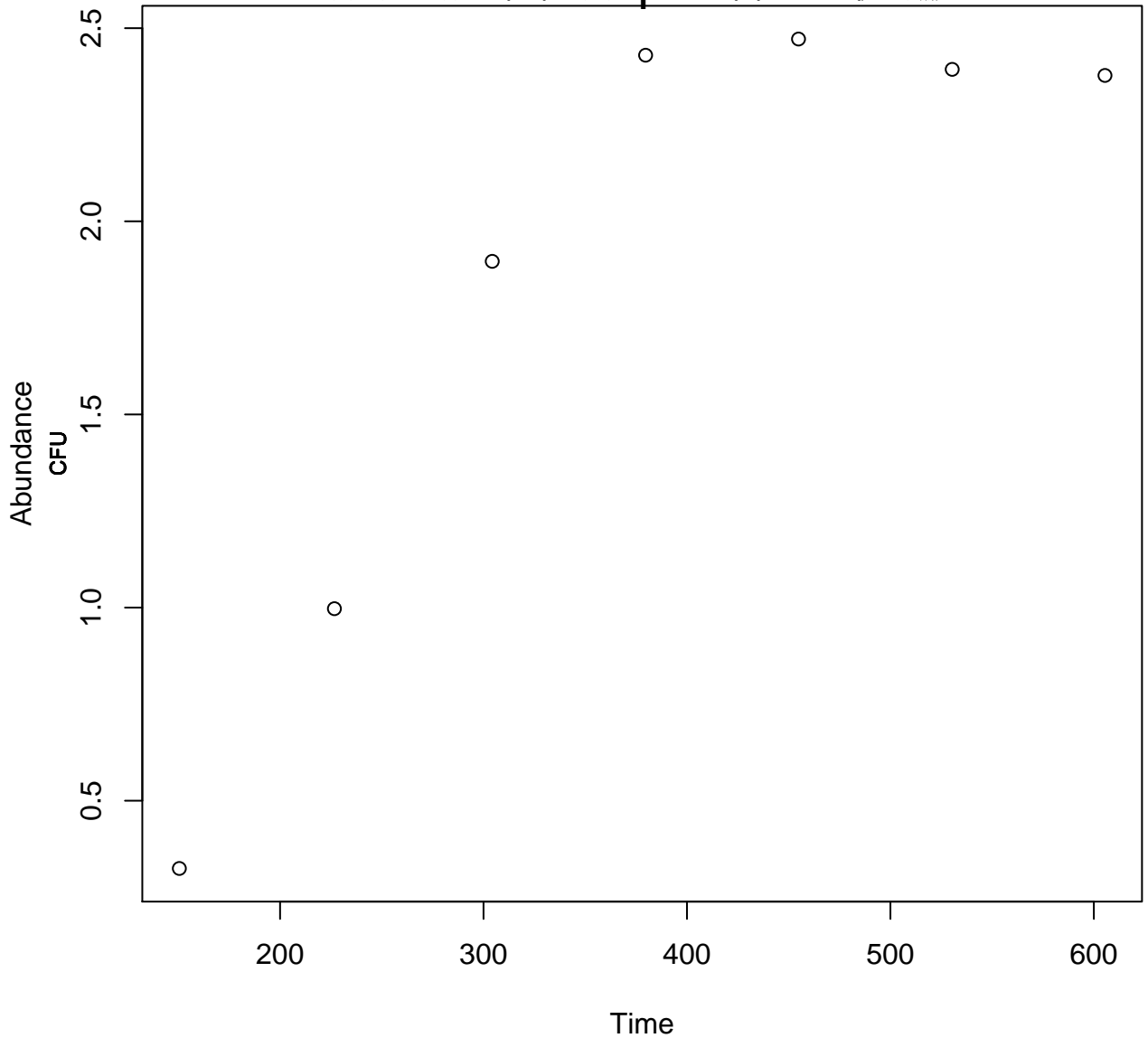


# Staphylococcus spp. Cooked Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

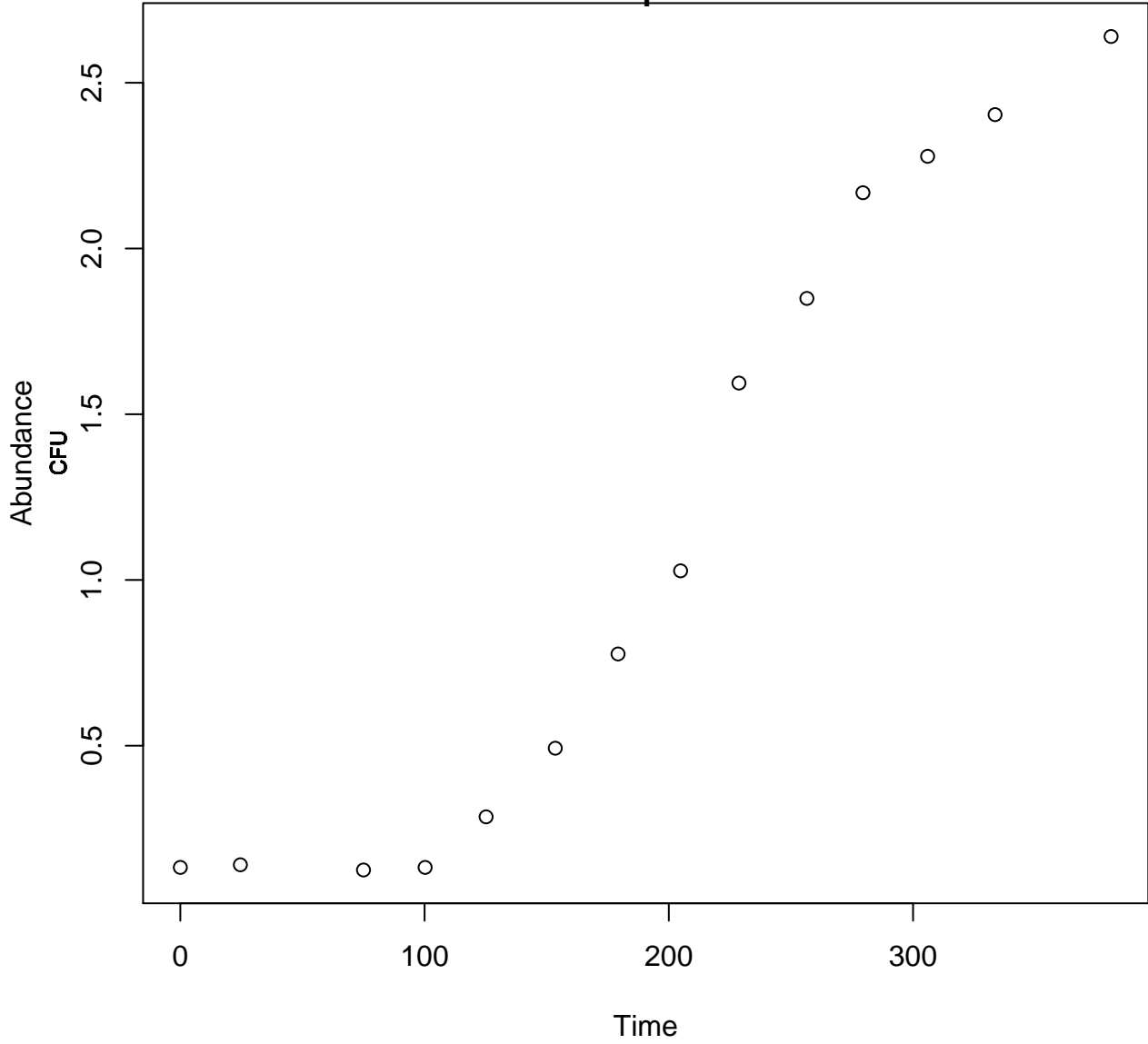


Staphylococcus spp.  
Cooked Chicken Breast

7

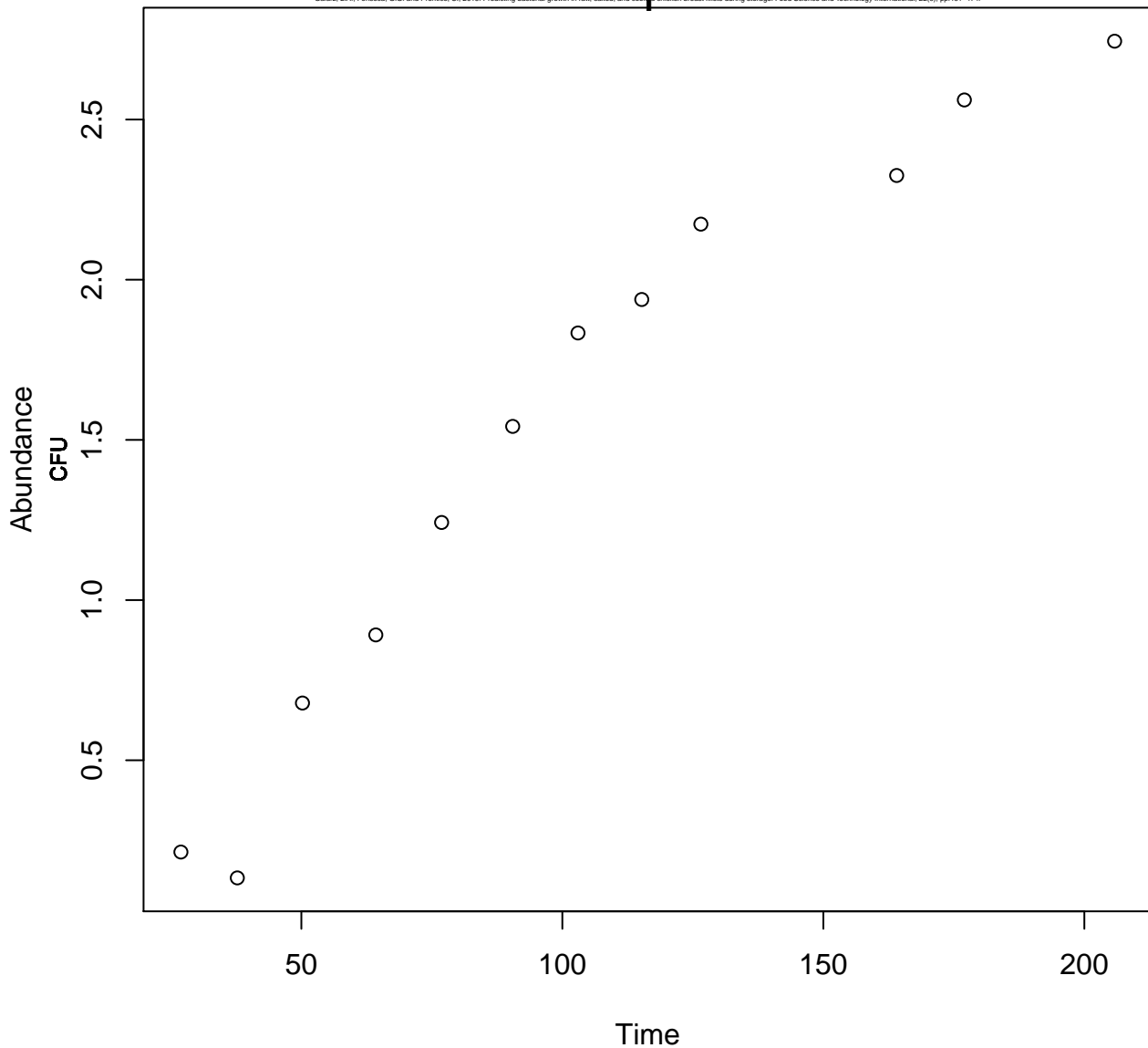
1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



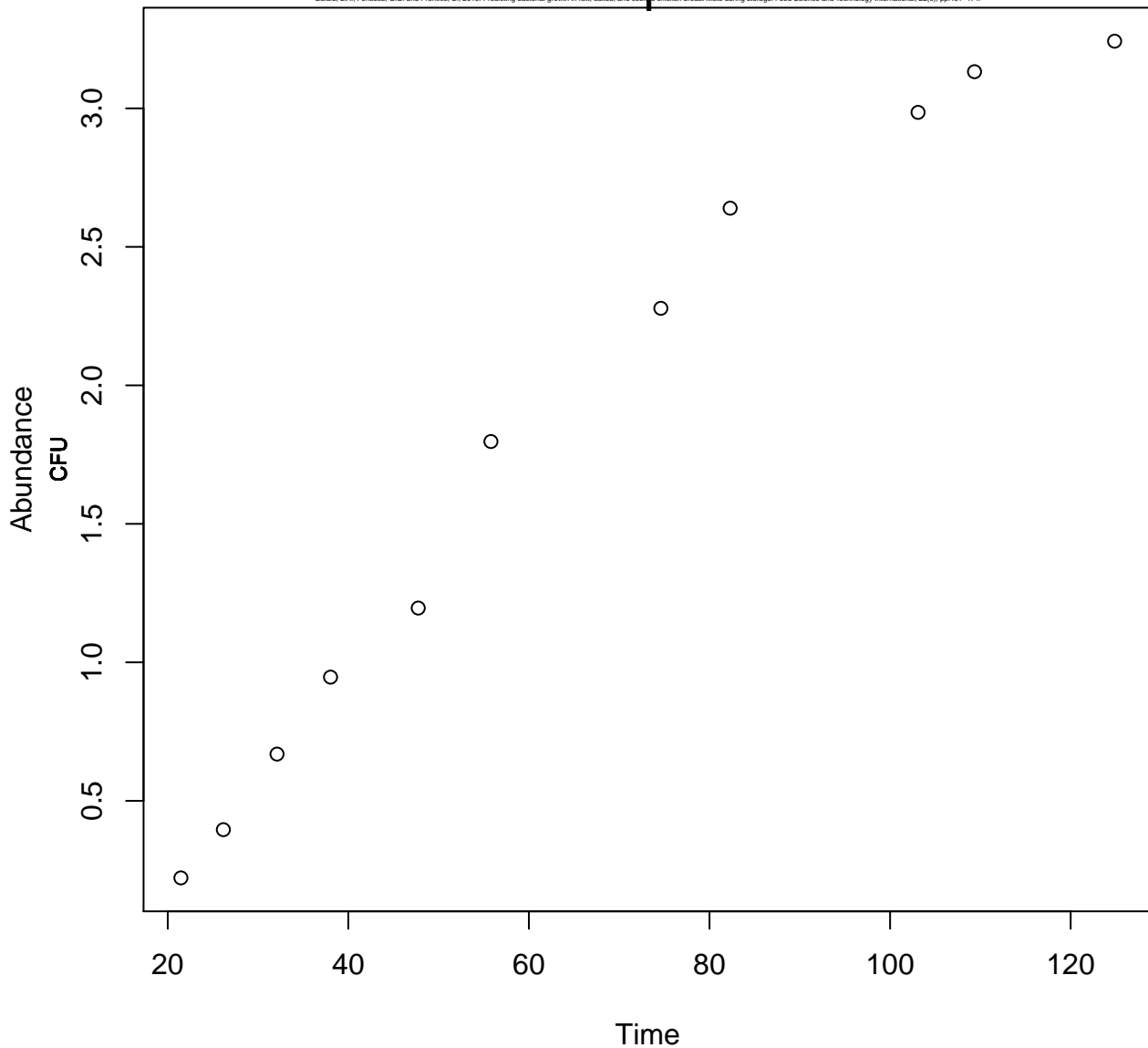
Staphylococcus spp.  
Cooked Chicken Breast  
10

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



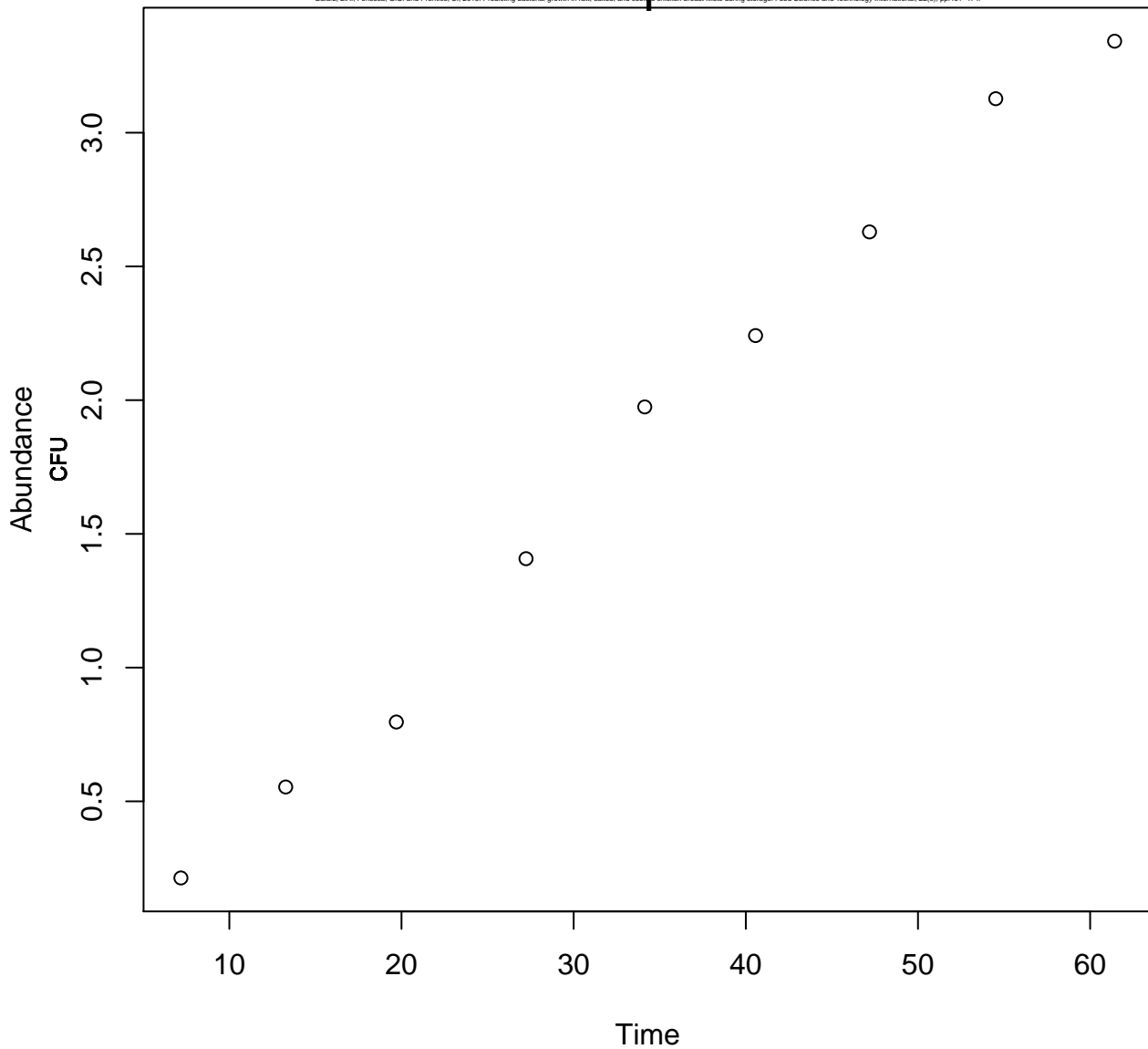
**Staphylococcus spp.**  
**Cooked Chicken Breast**  
**15**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461–474.



Staphylococcus spp.  
Cooked Chicken Breast  
20

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

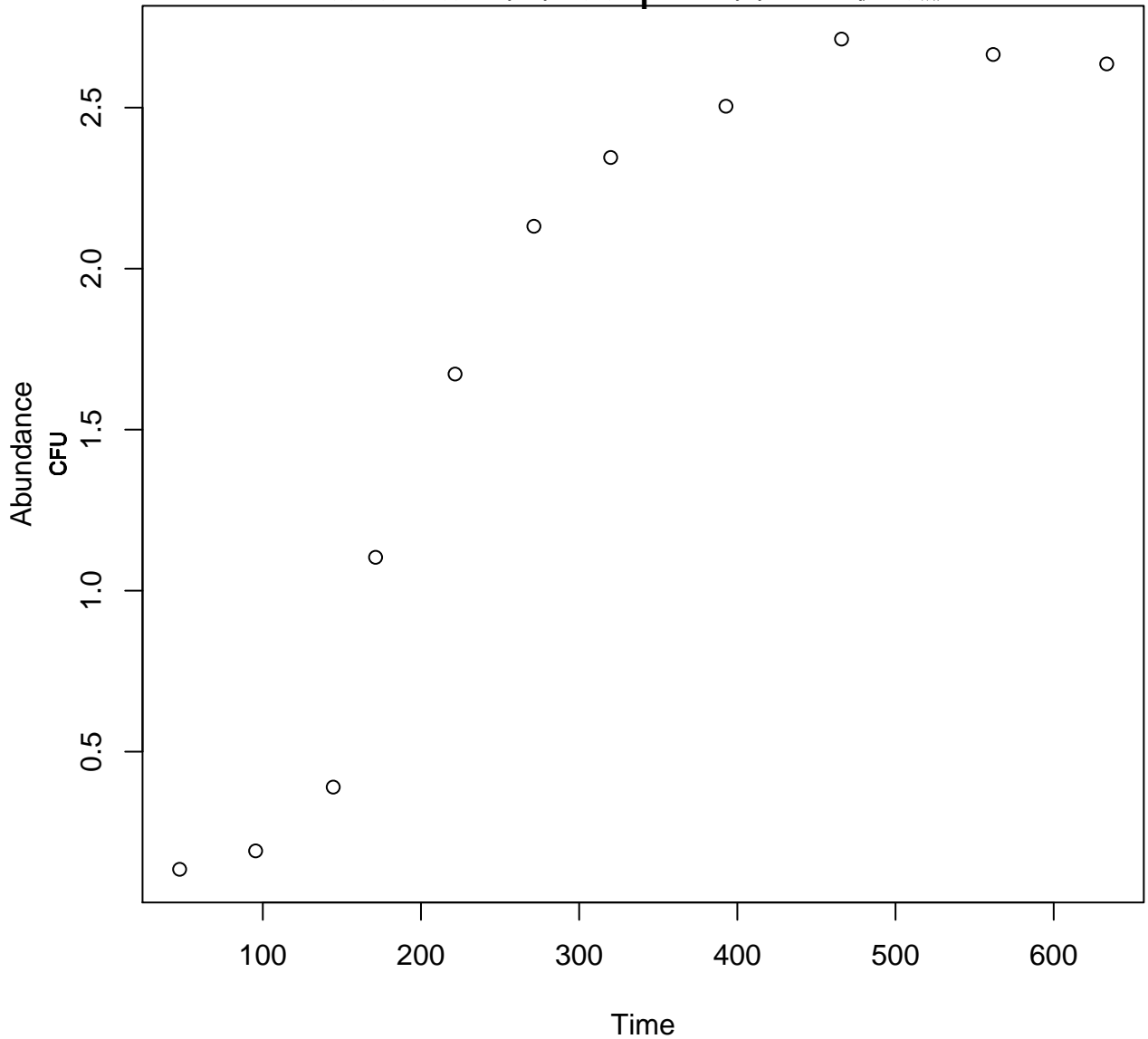


# Pseudomonas spp. Raw Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.



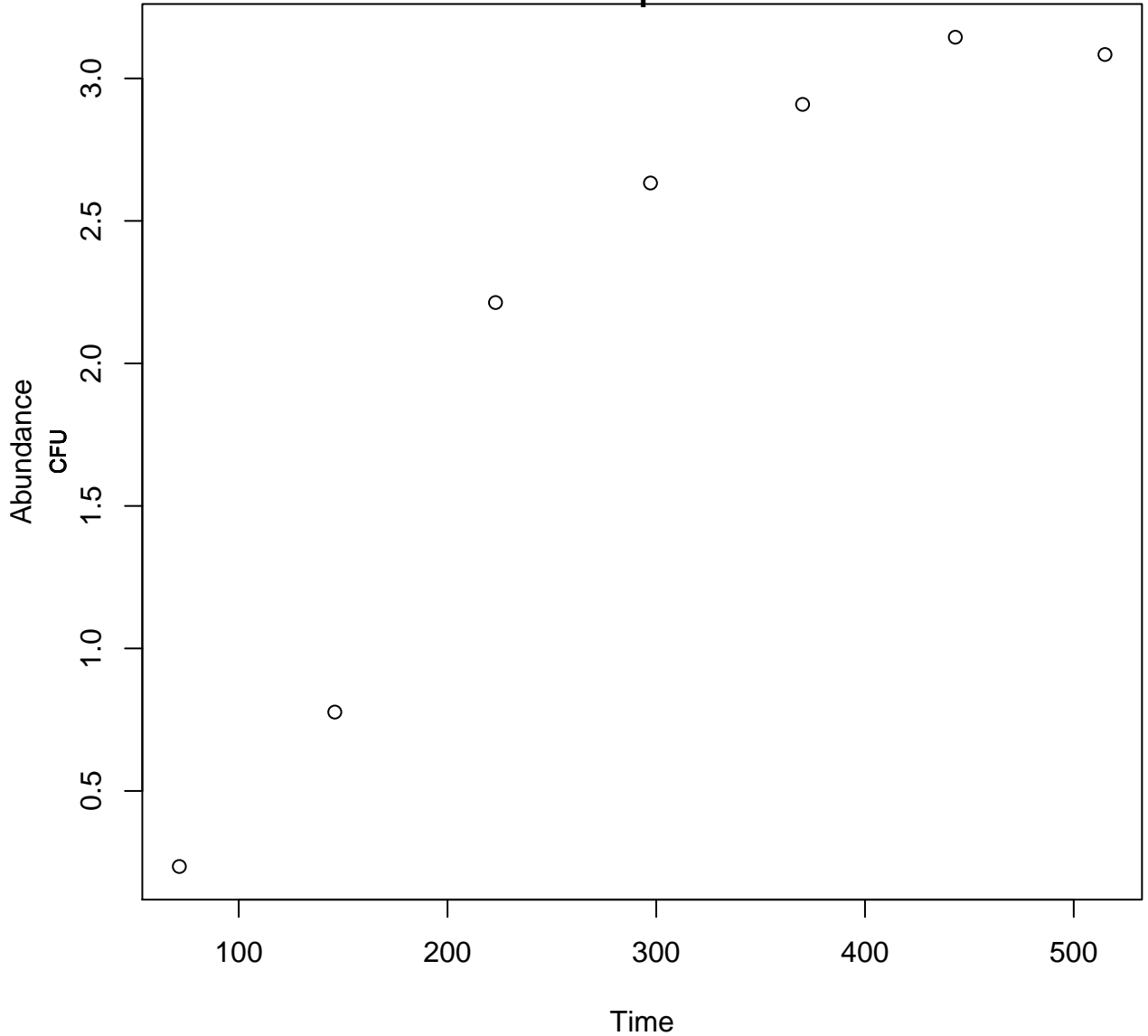


# Pseudomonas spp. Raw Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

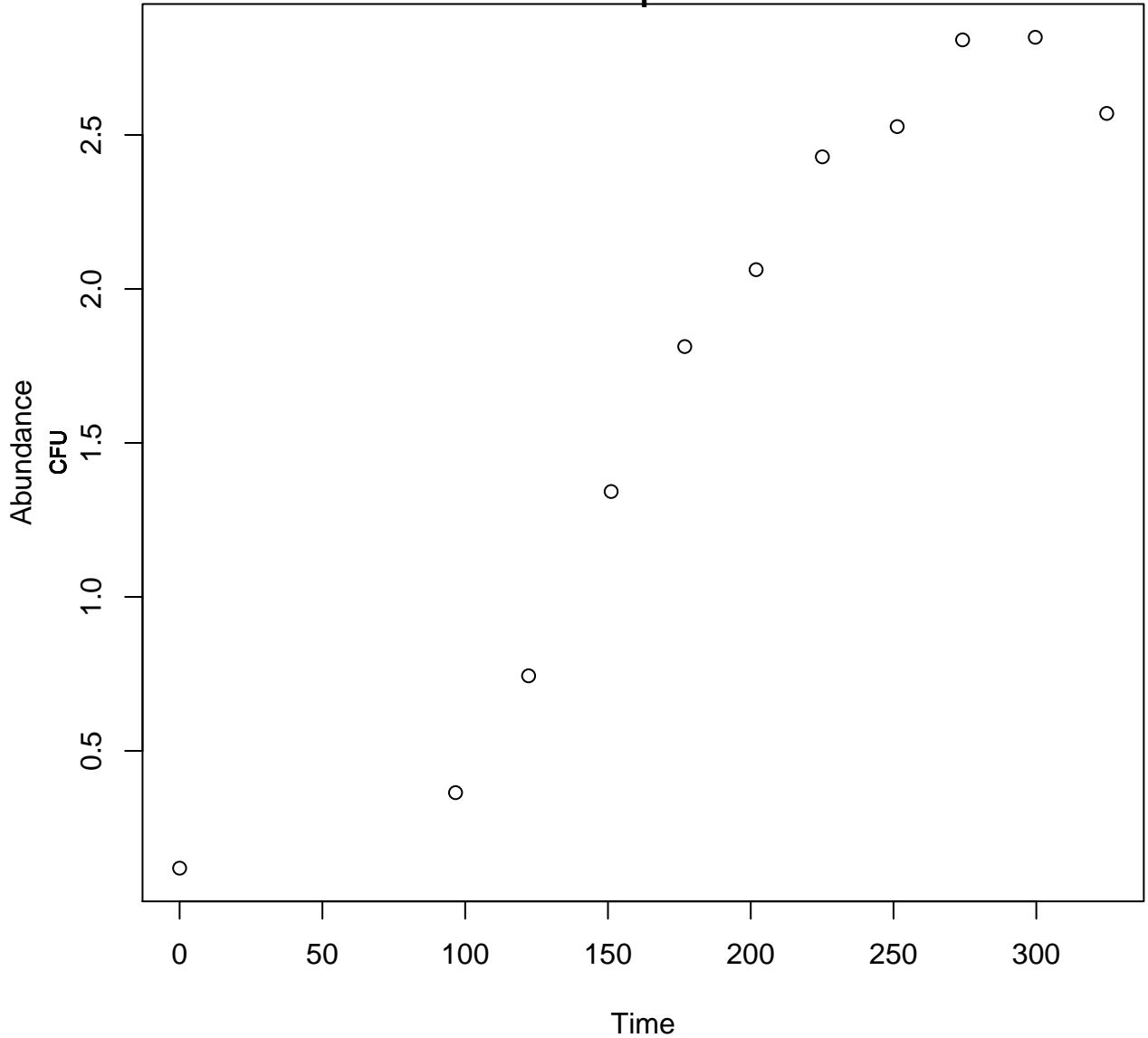


# Pseudomonas spp. Raw Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

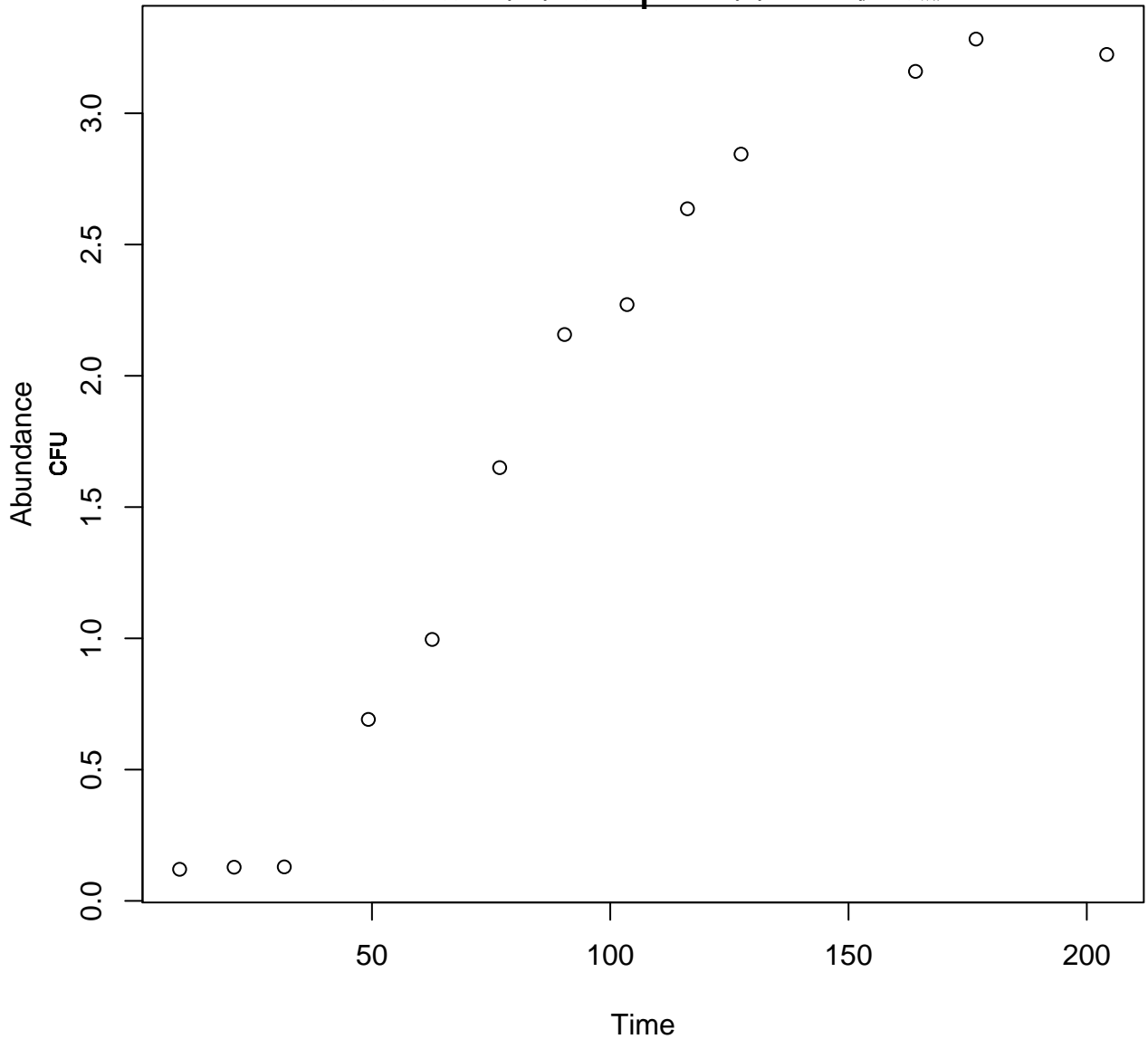


# Pseudomonas spp. Raw Chicken Breast

10

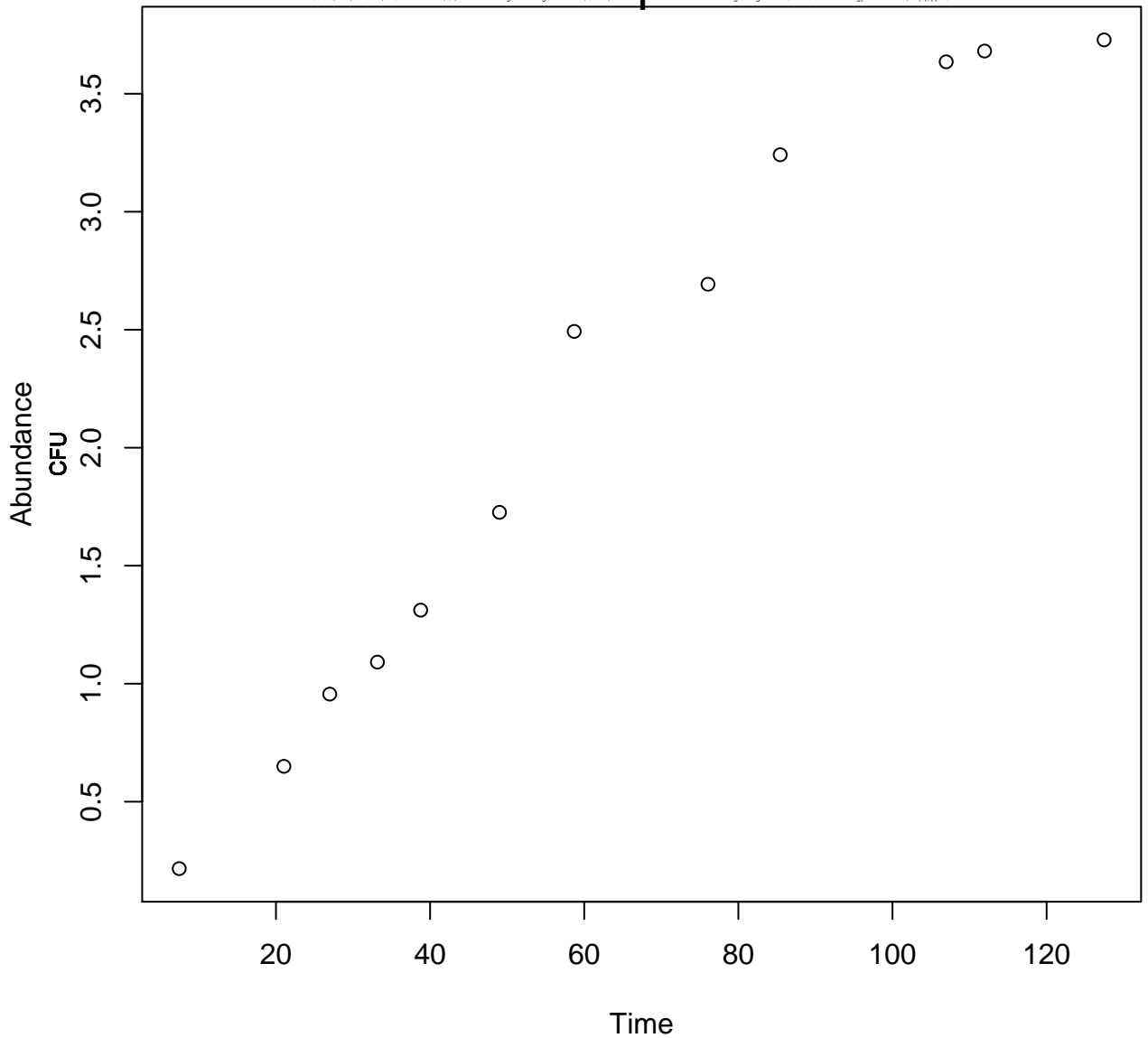
1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



**Pseudomonas spp.**  
**Raw Chicken Breast**  
**15**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

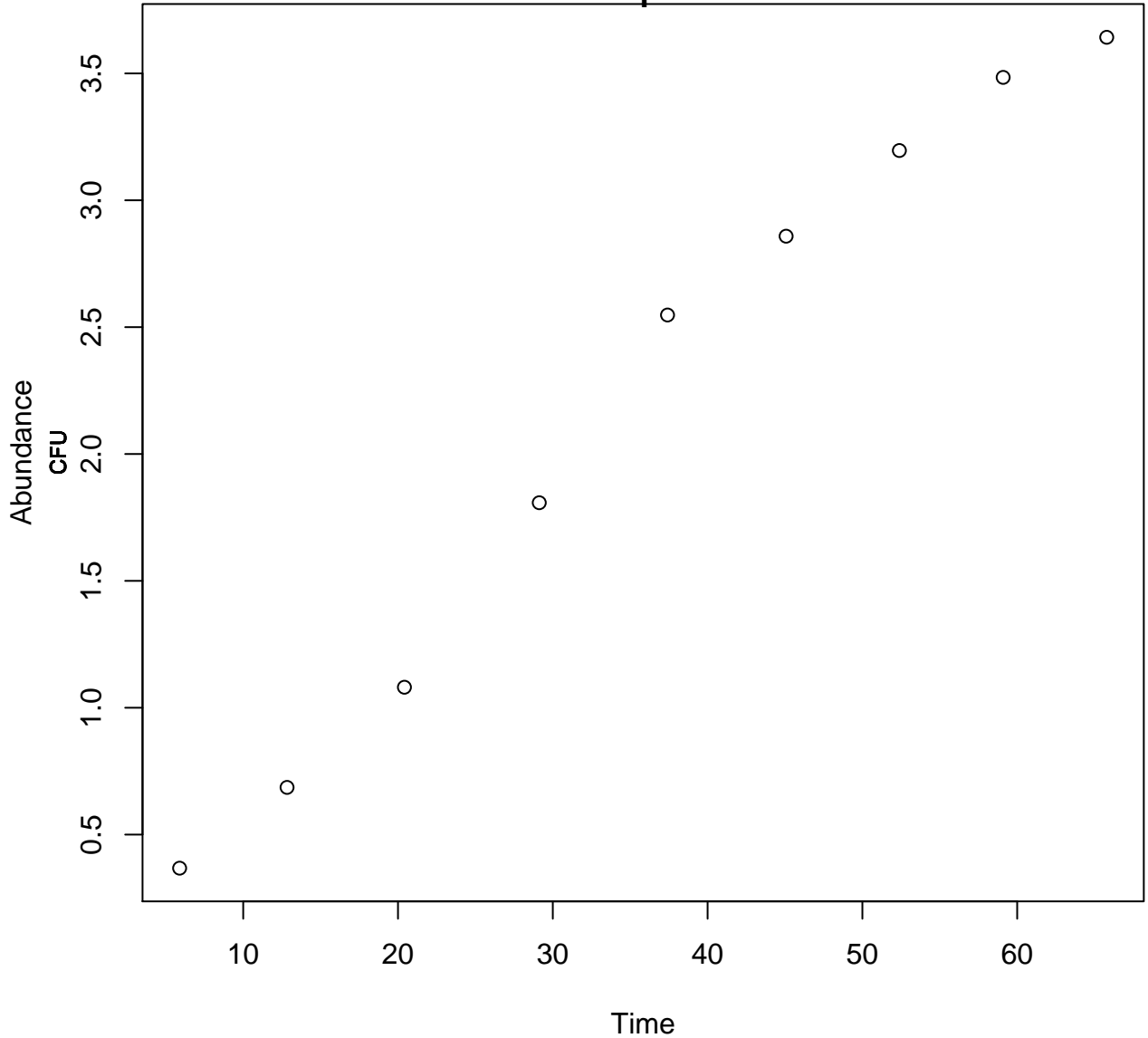


# Pseudomonas spp. Raw Chicken Breast

20

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

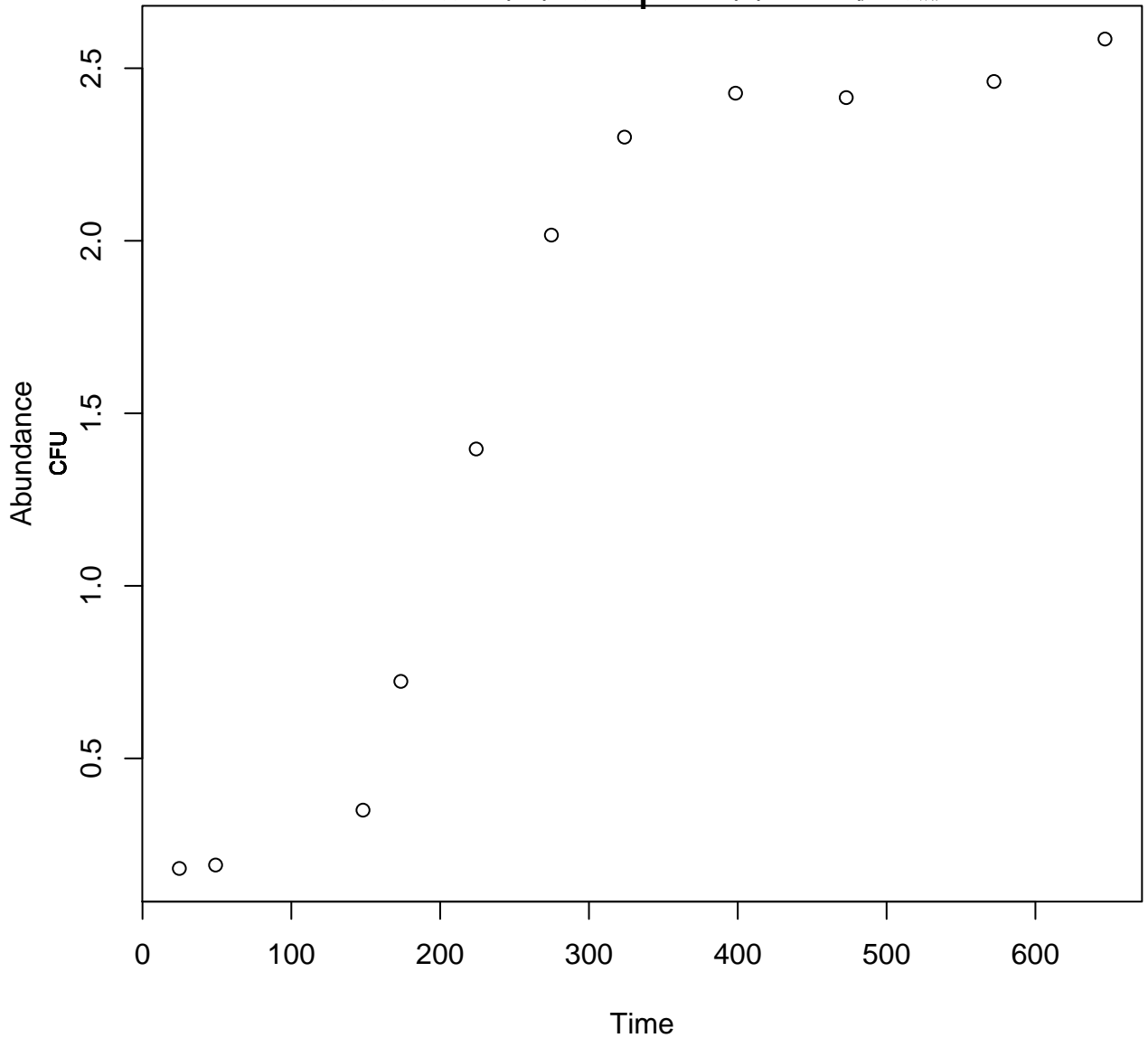


# Pseudomonas spp. Salted Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

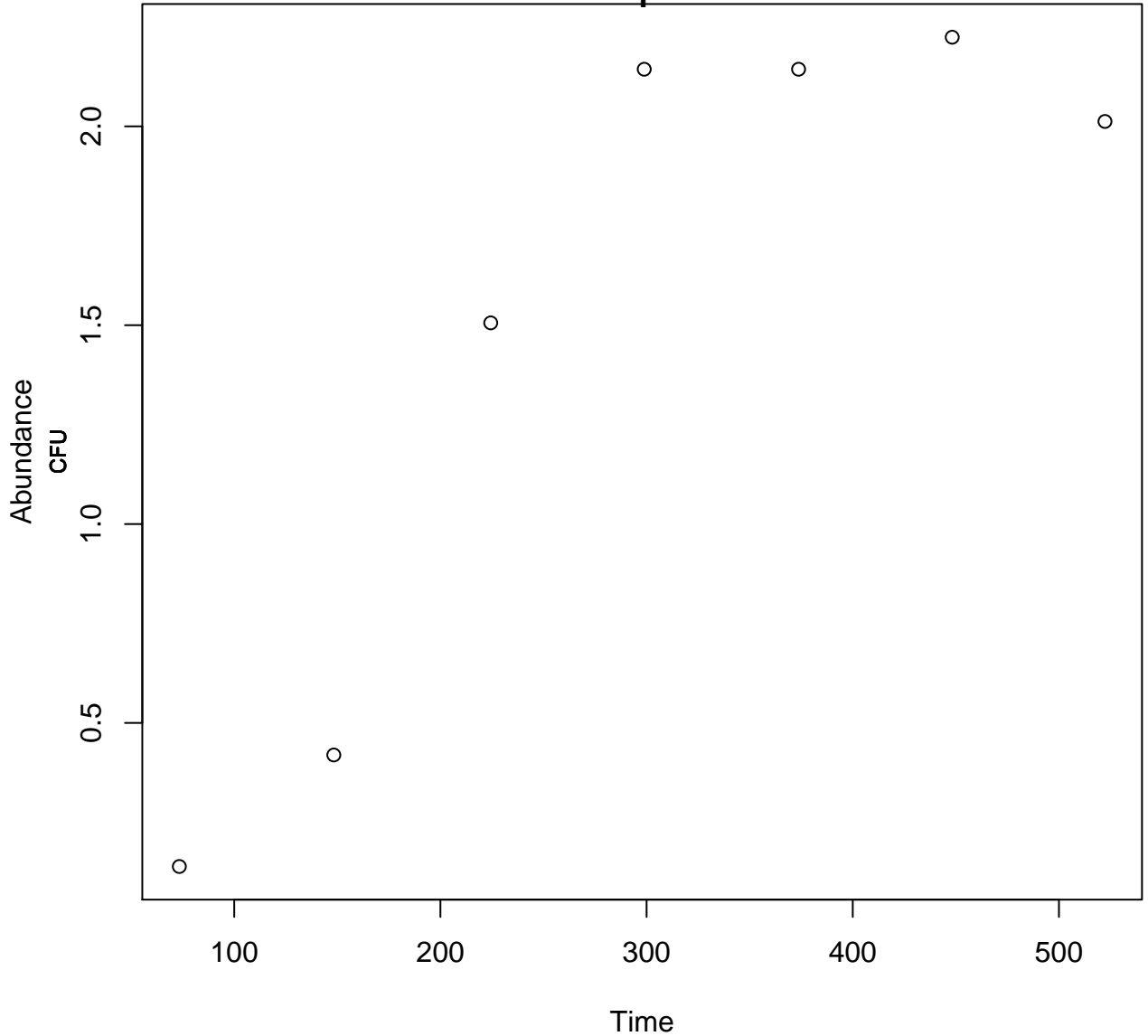


# Pseudomonas spp. Salted Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

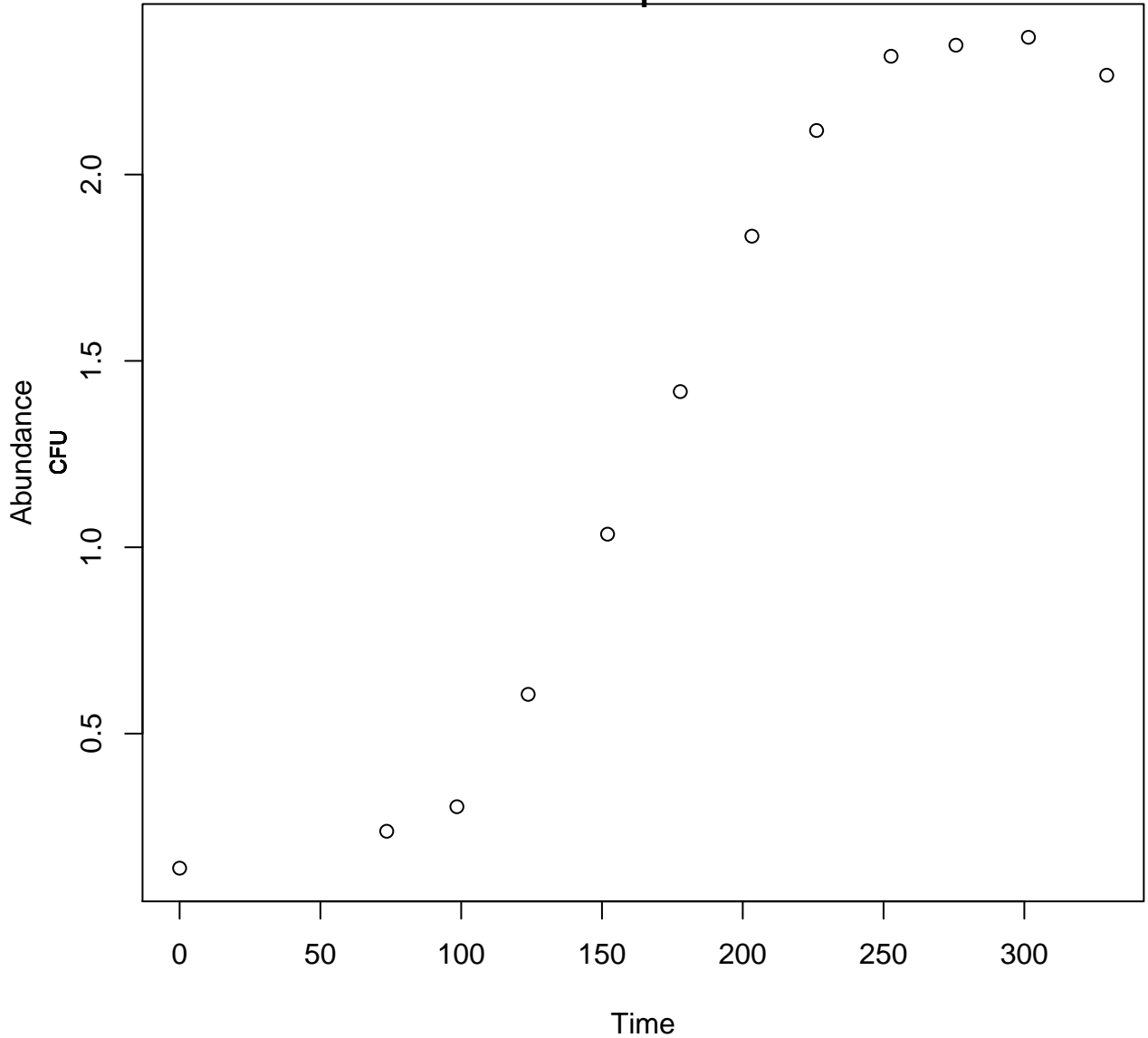


# Pseudomonas spp. Salted Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



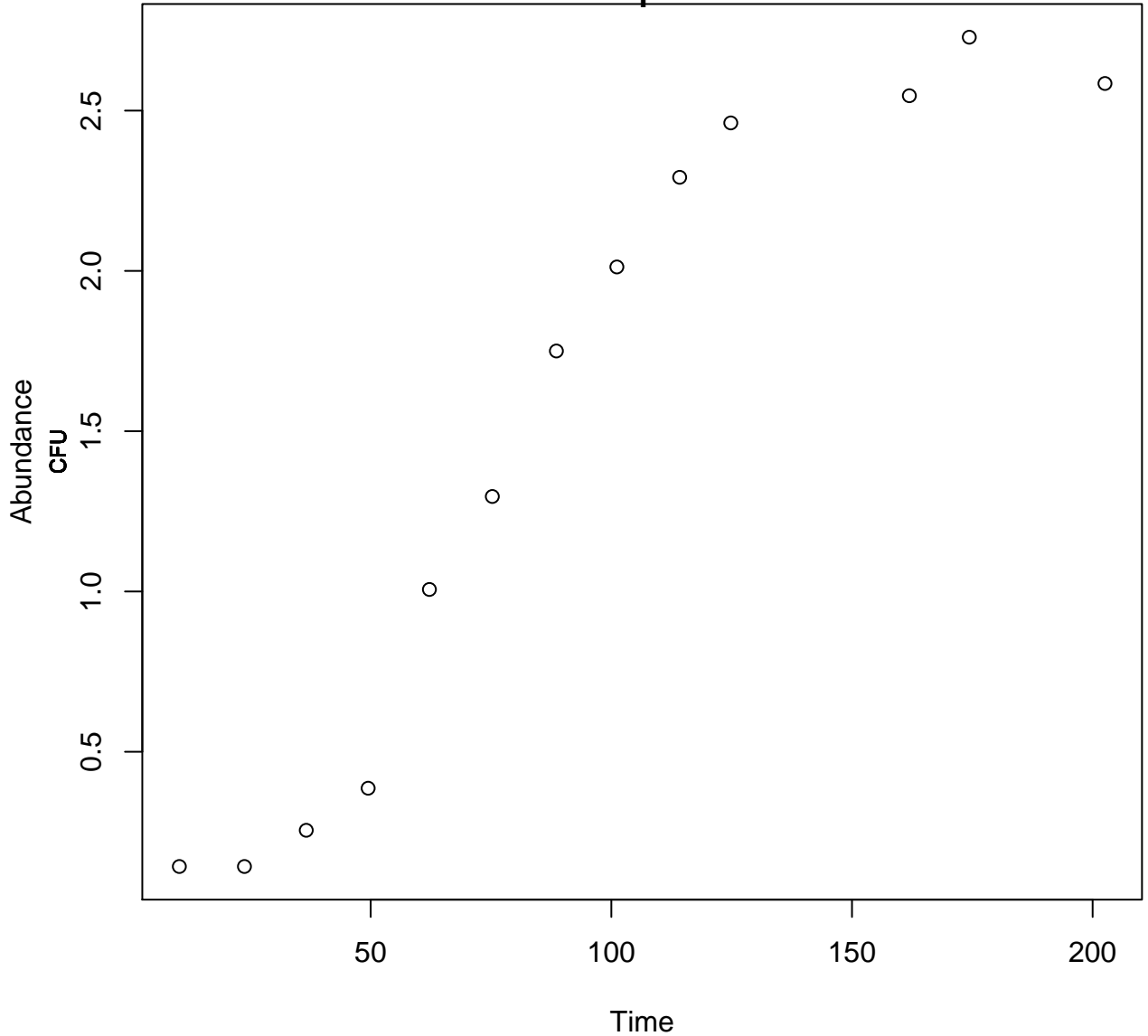


# Pseudomonas spp. Salted Chicken Breast

10

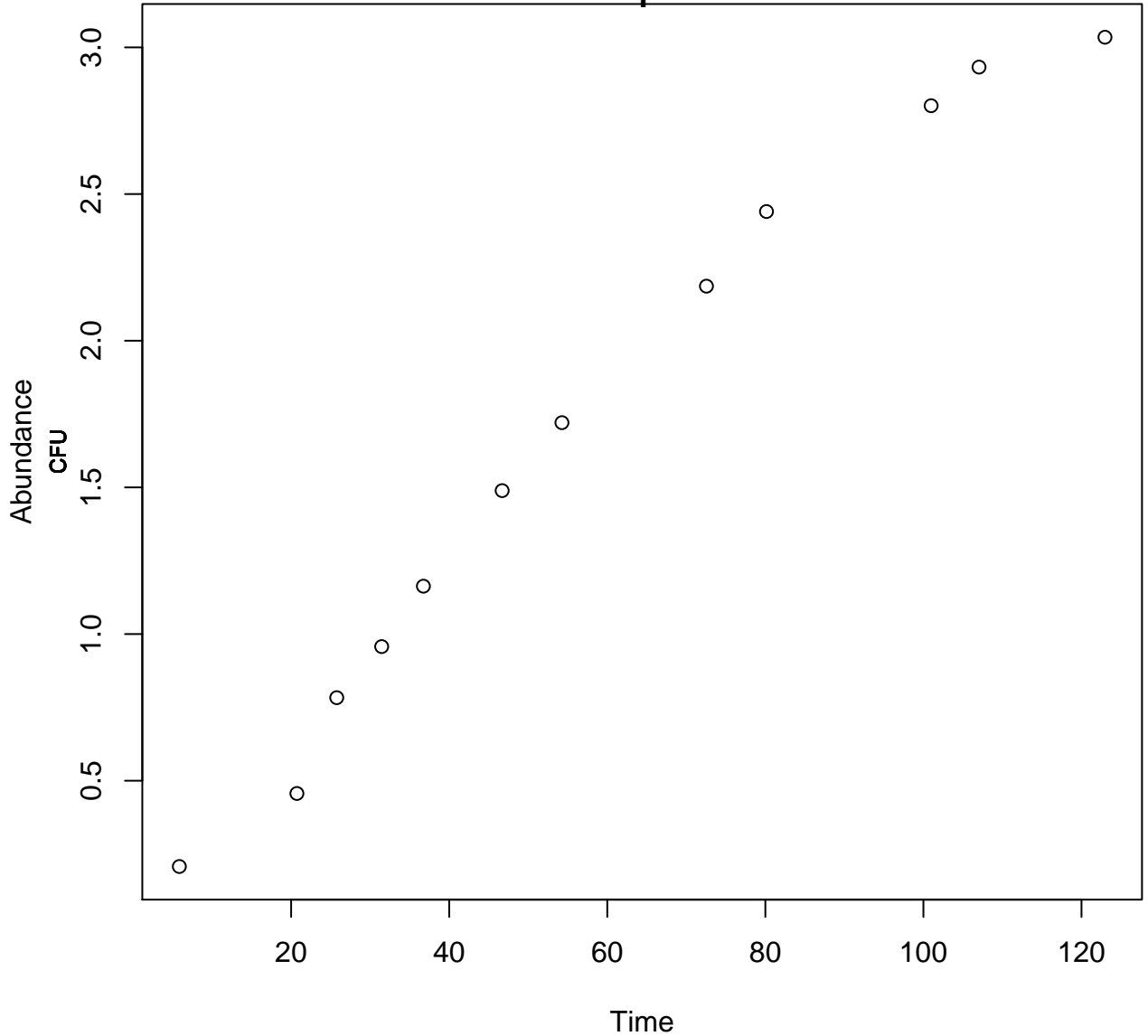
1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



**Pseudomonas spp.**  
**Salted Chicken Breast**  
**15**

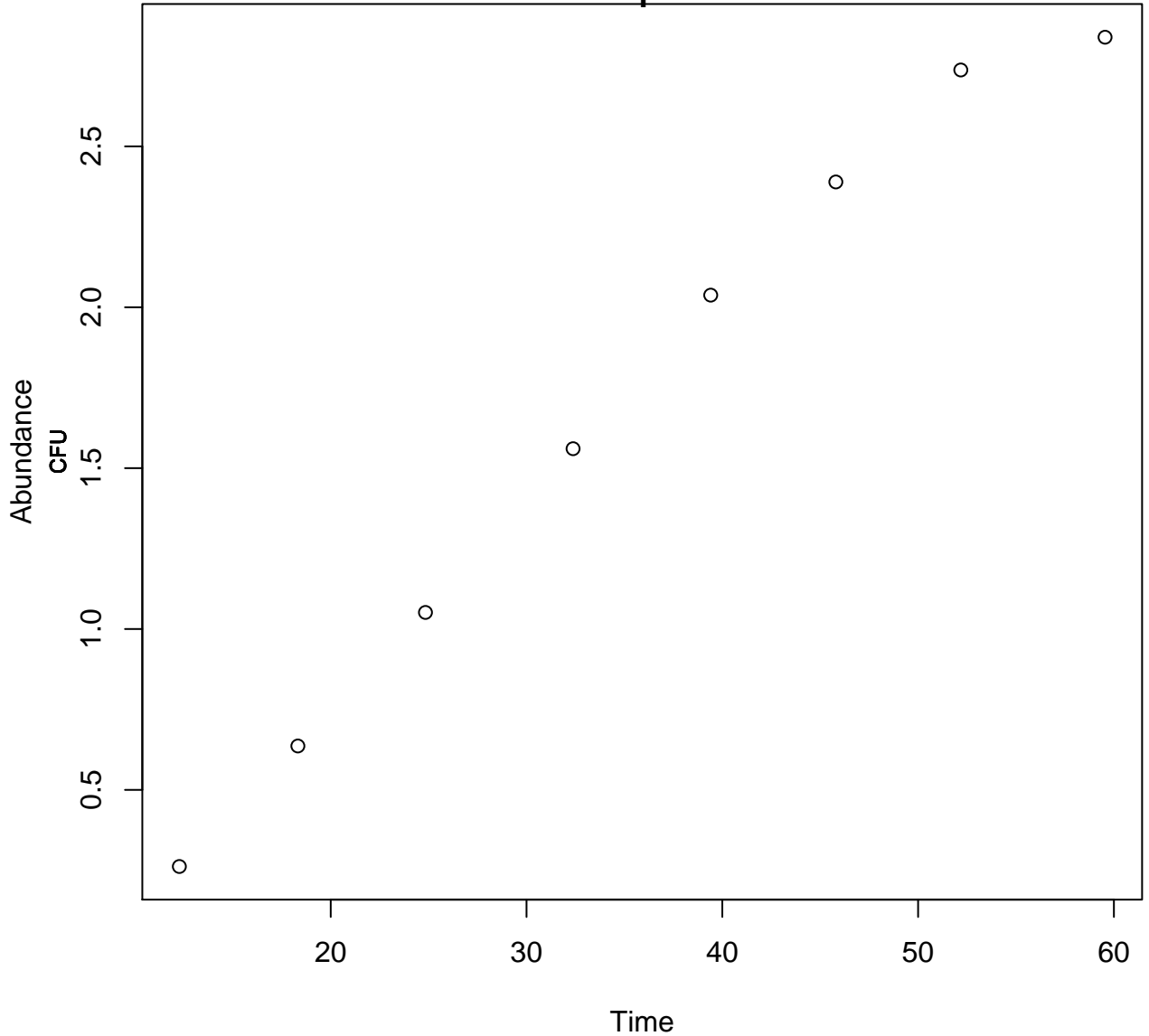
Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Pseudomonas spp. Salted Chicken Breast

20  
1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

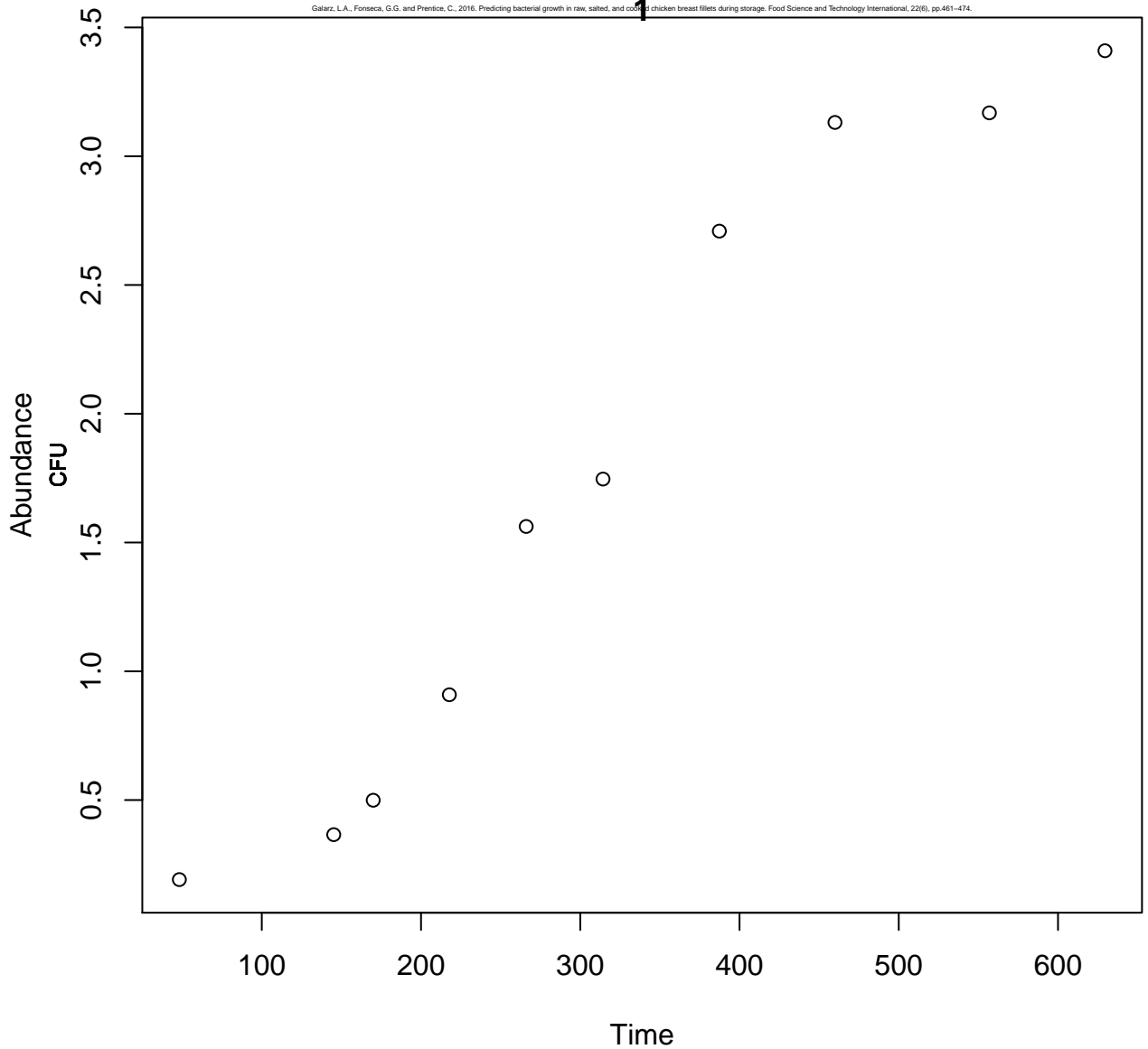


# Pseudomonas spp. Cooked Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

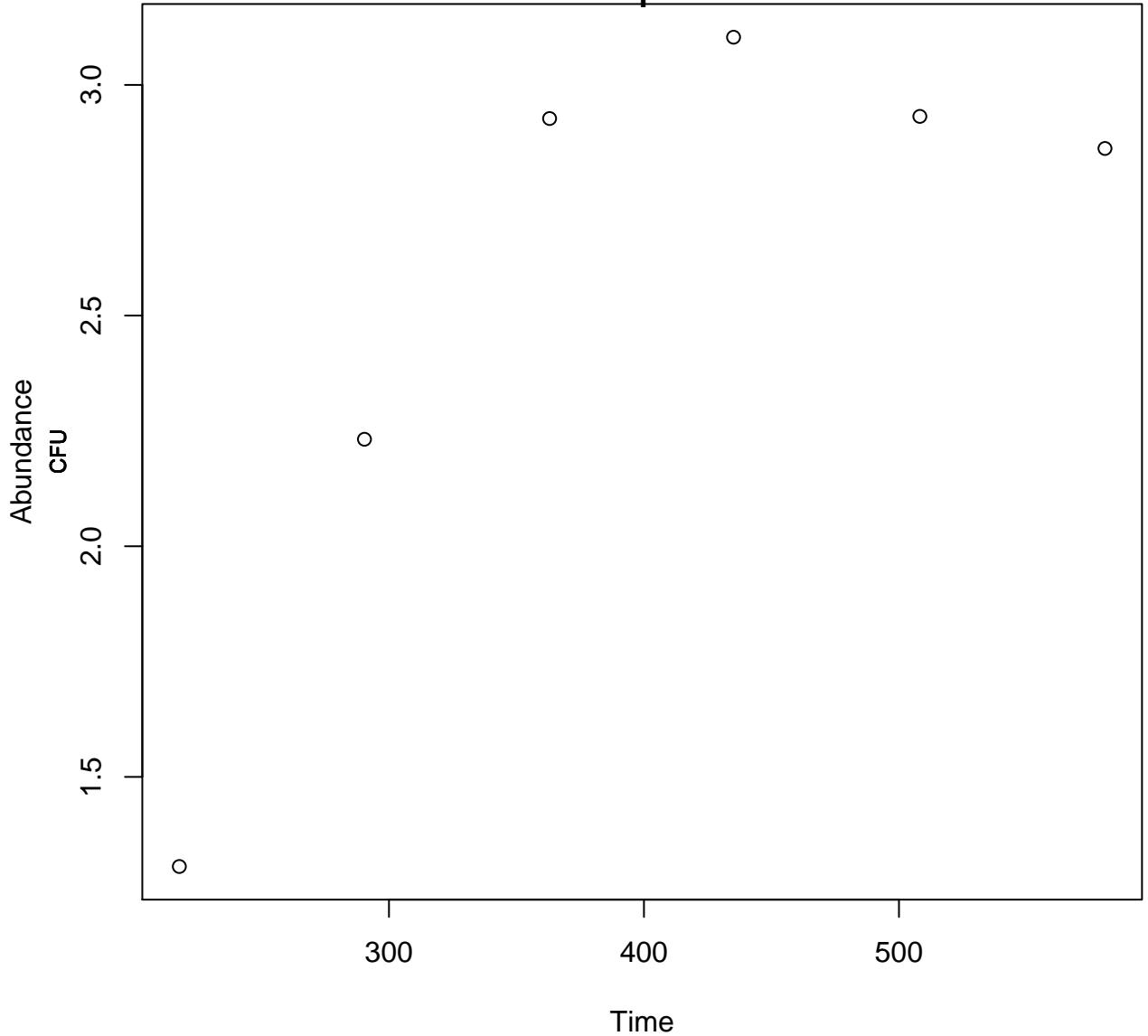


# Pseudomonas spp. Cooked Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

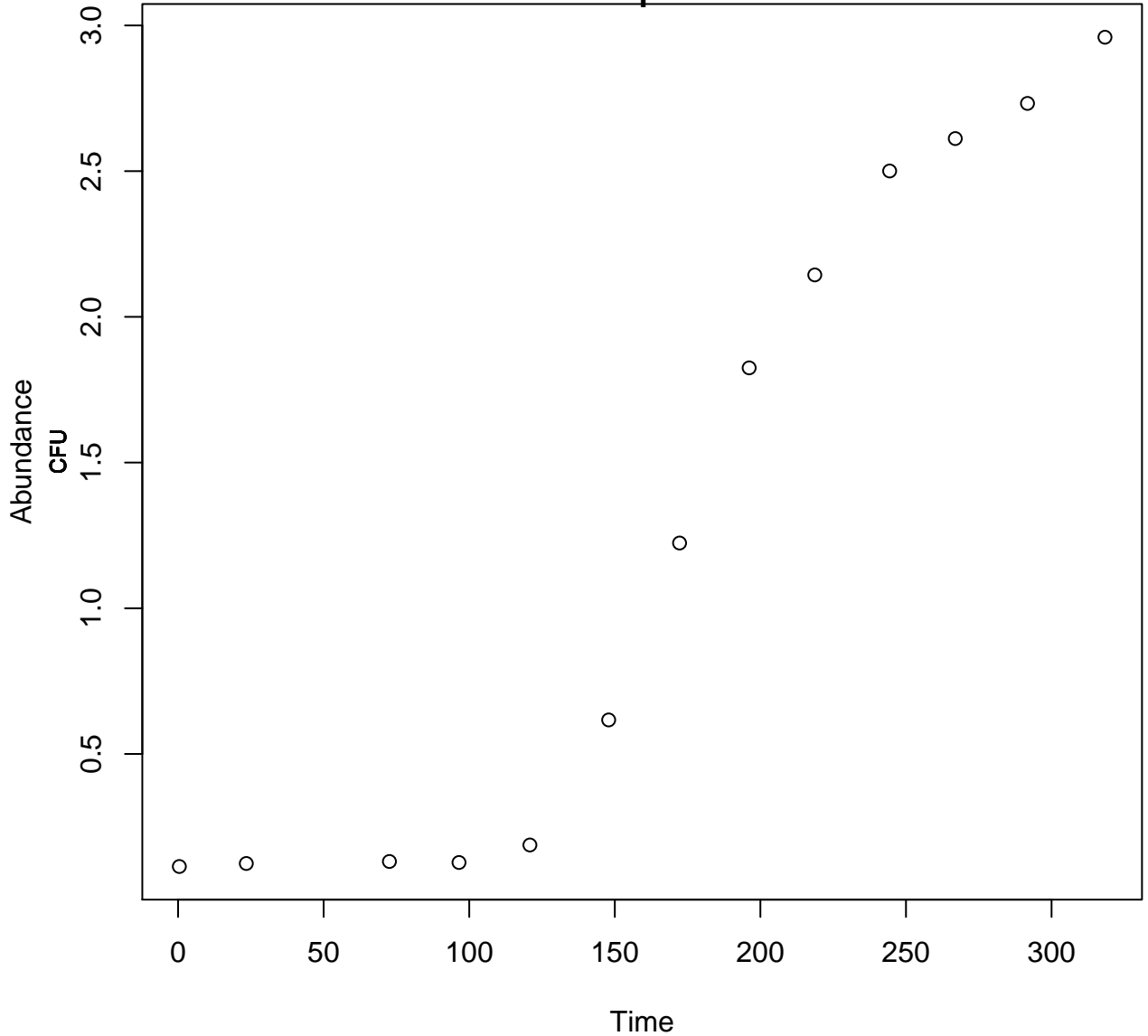


# Pseudomonas spp. Cooked Chicken Breast

7

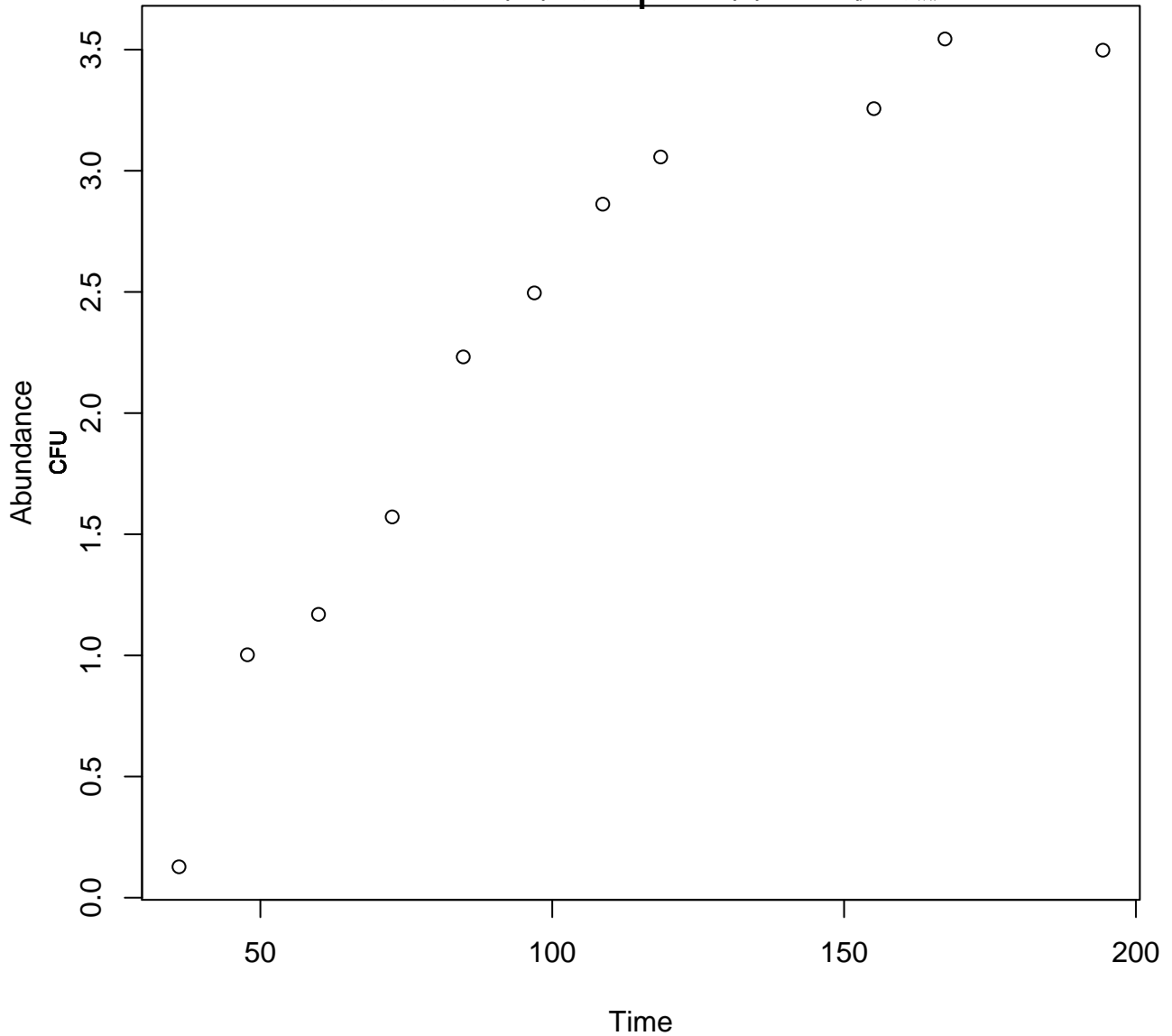
1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



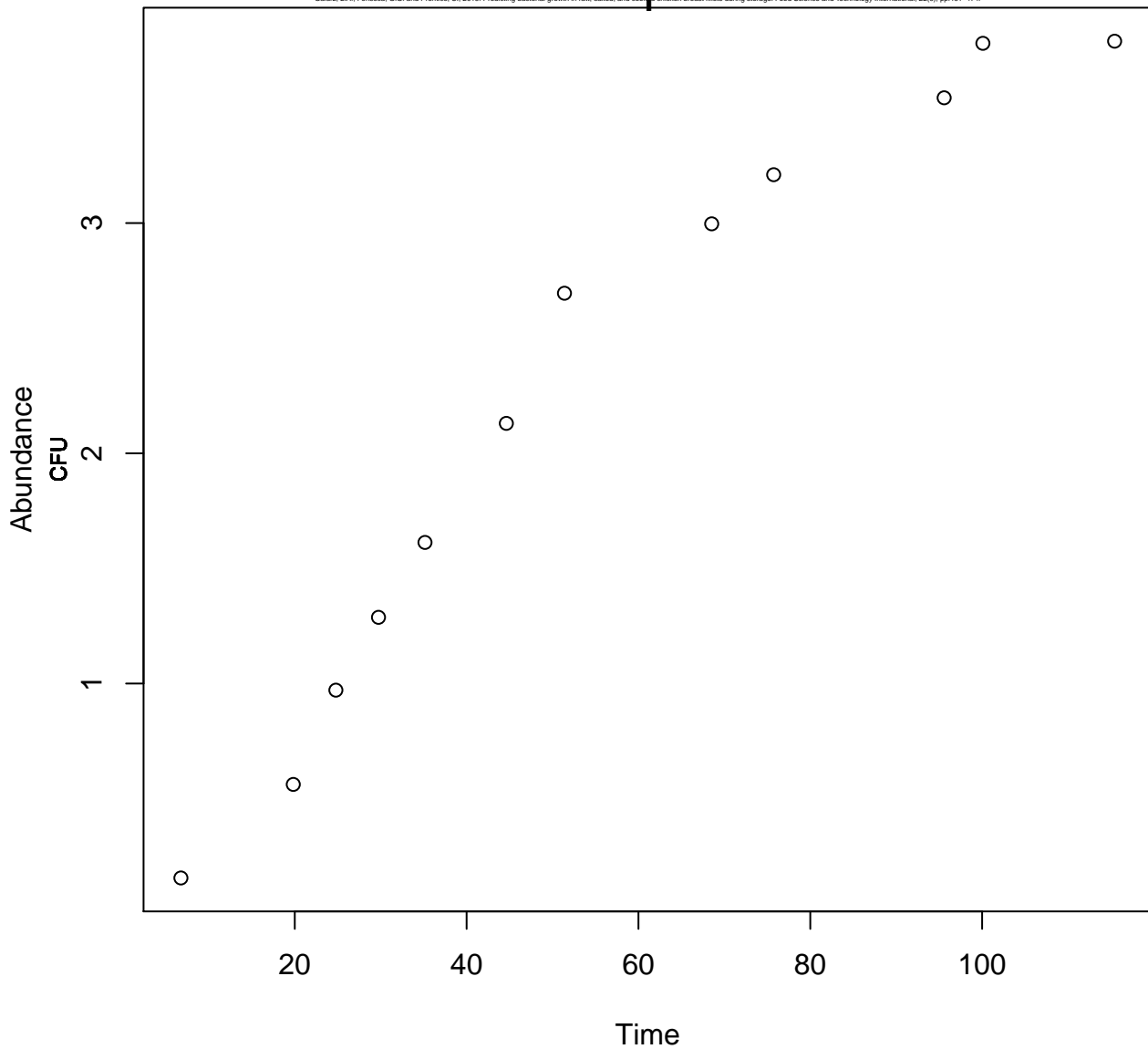
**Pseudomonas spp.**  
**Cooked Chicken Breast**  
**10**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



**Pseudomonas spp.**  
**Cooked Chicken Breast**  
**15**

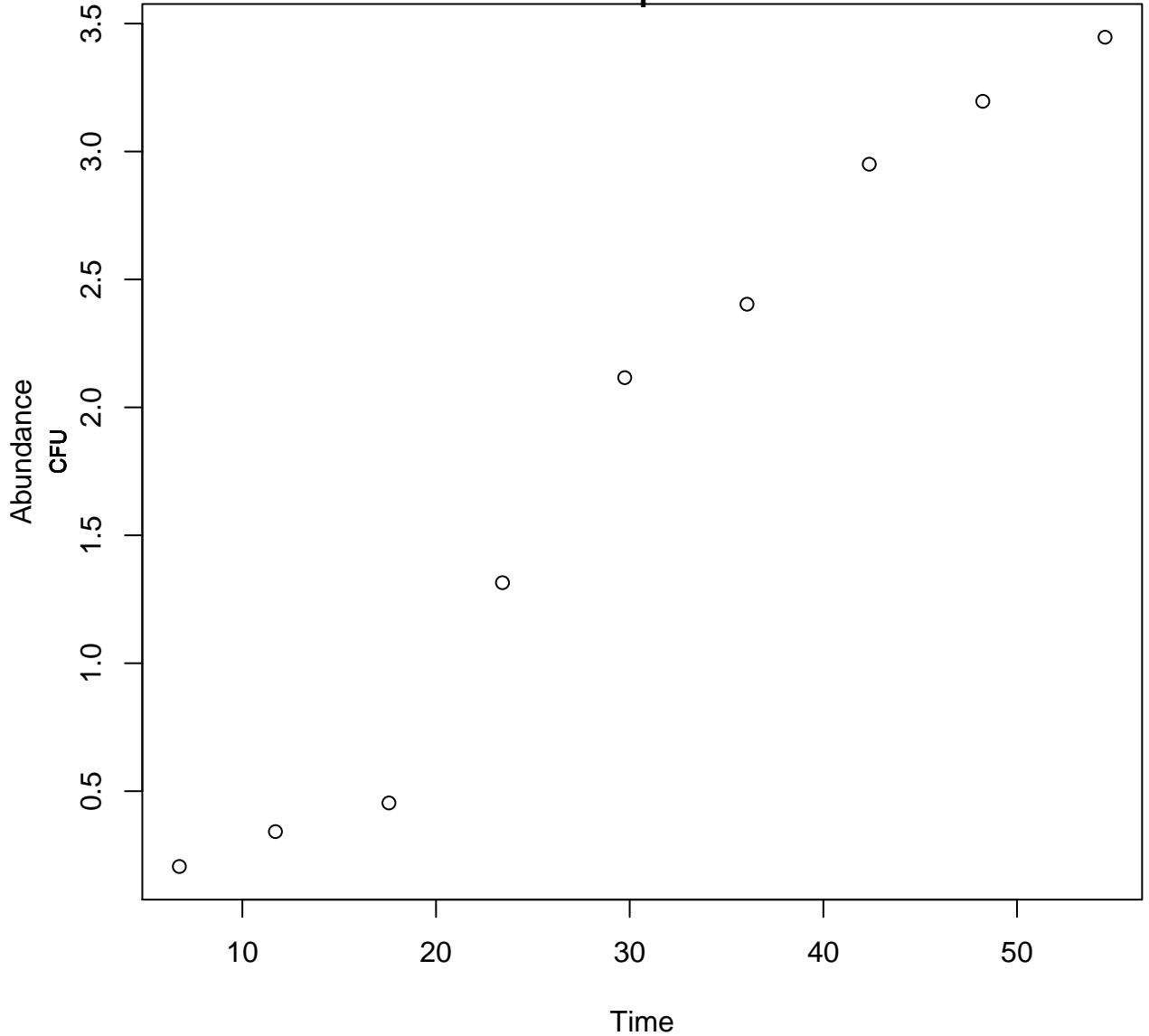
Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.





**Pseudomonas spp.**  
**Cooked Chicken Breast**  
**20**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

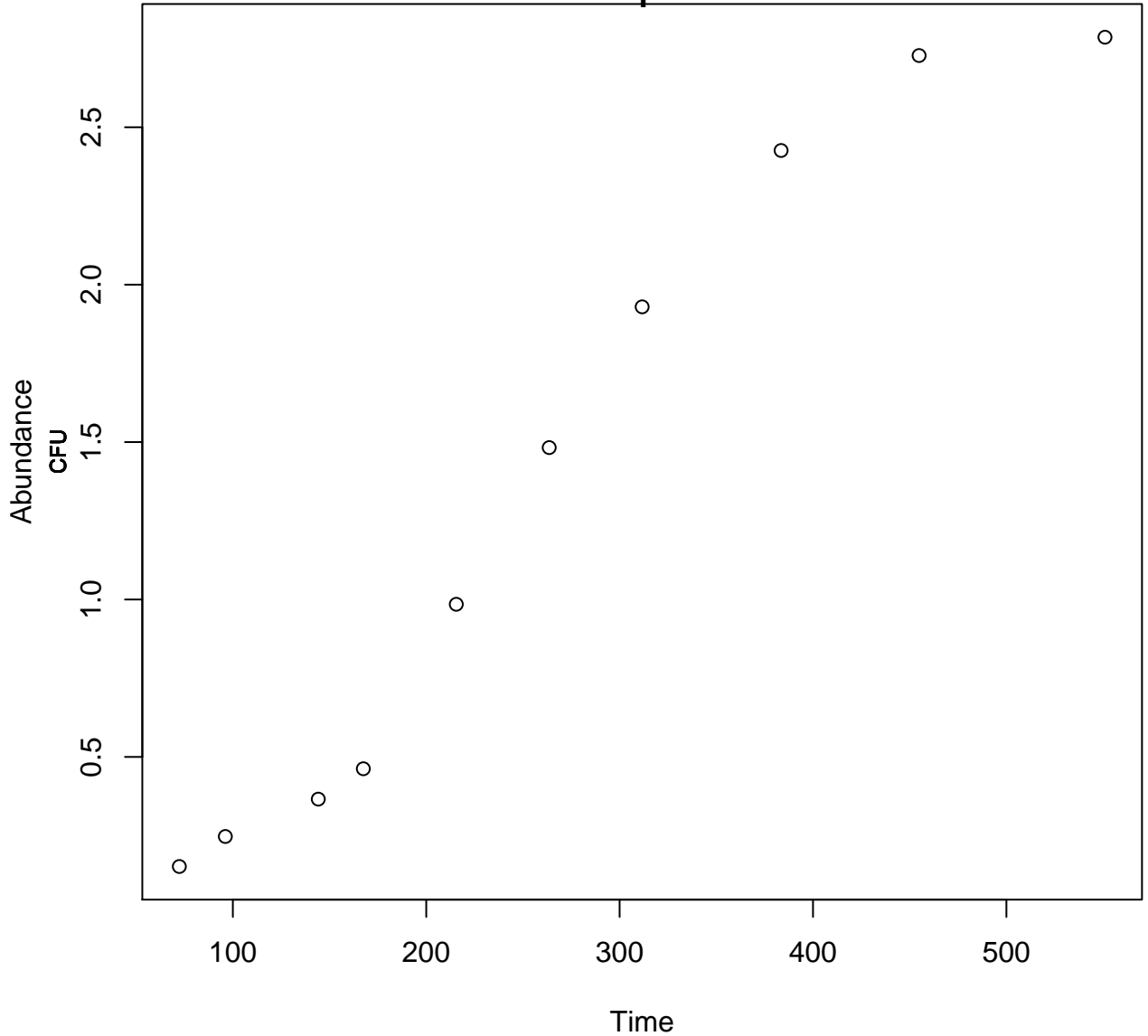


# Aerobic Psychotropic. Raw Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

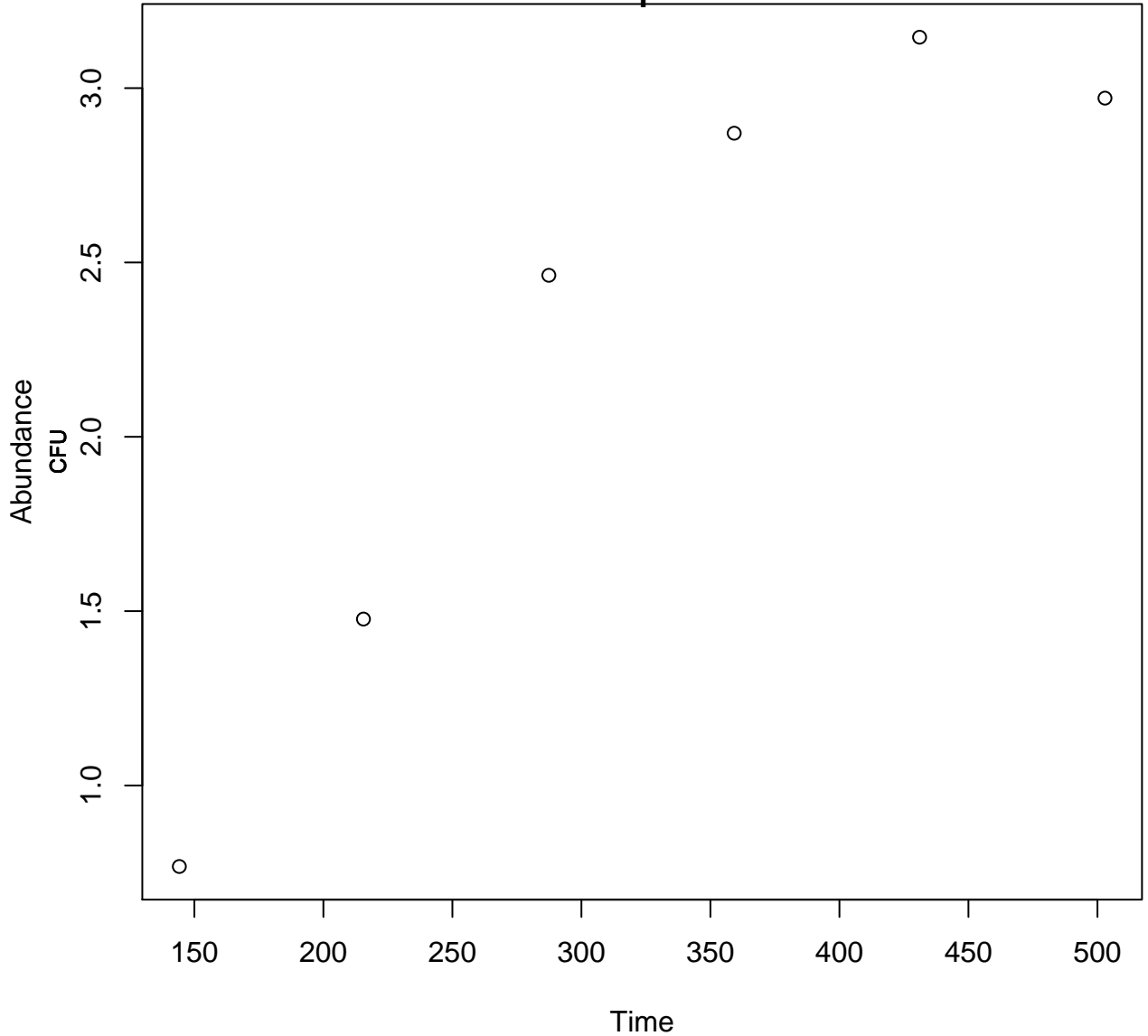


# Aerobic Psychotropic. Raw Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

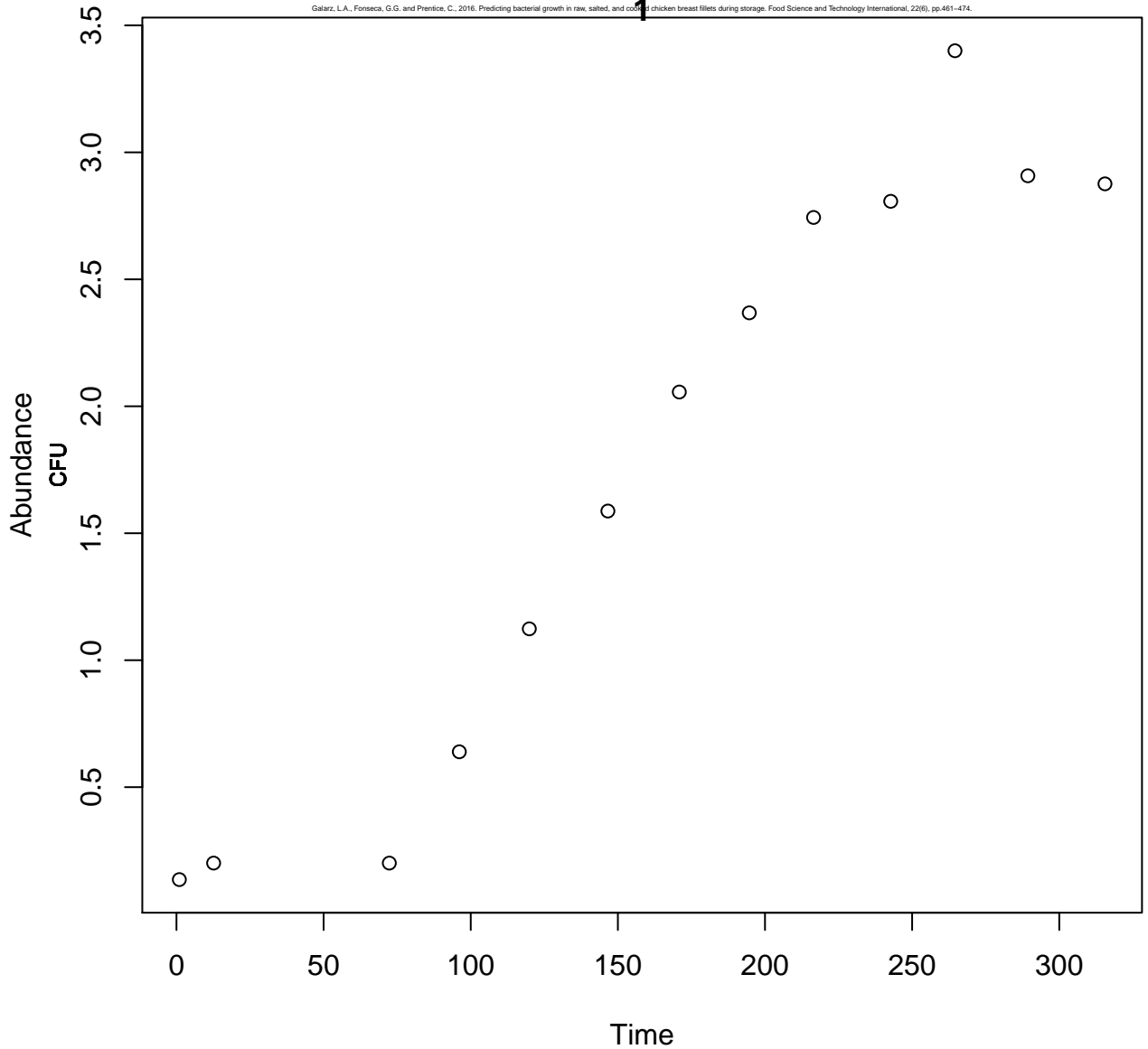


# Aerobic Psychotropic. Raw Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



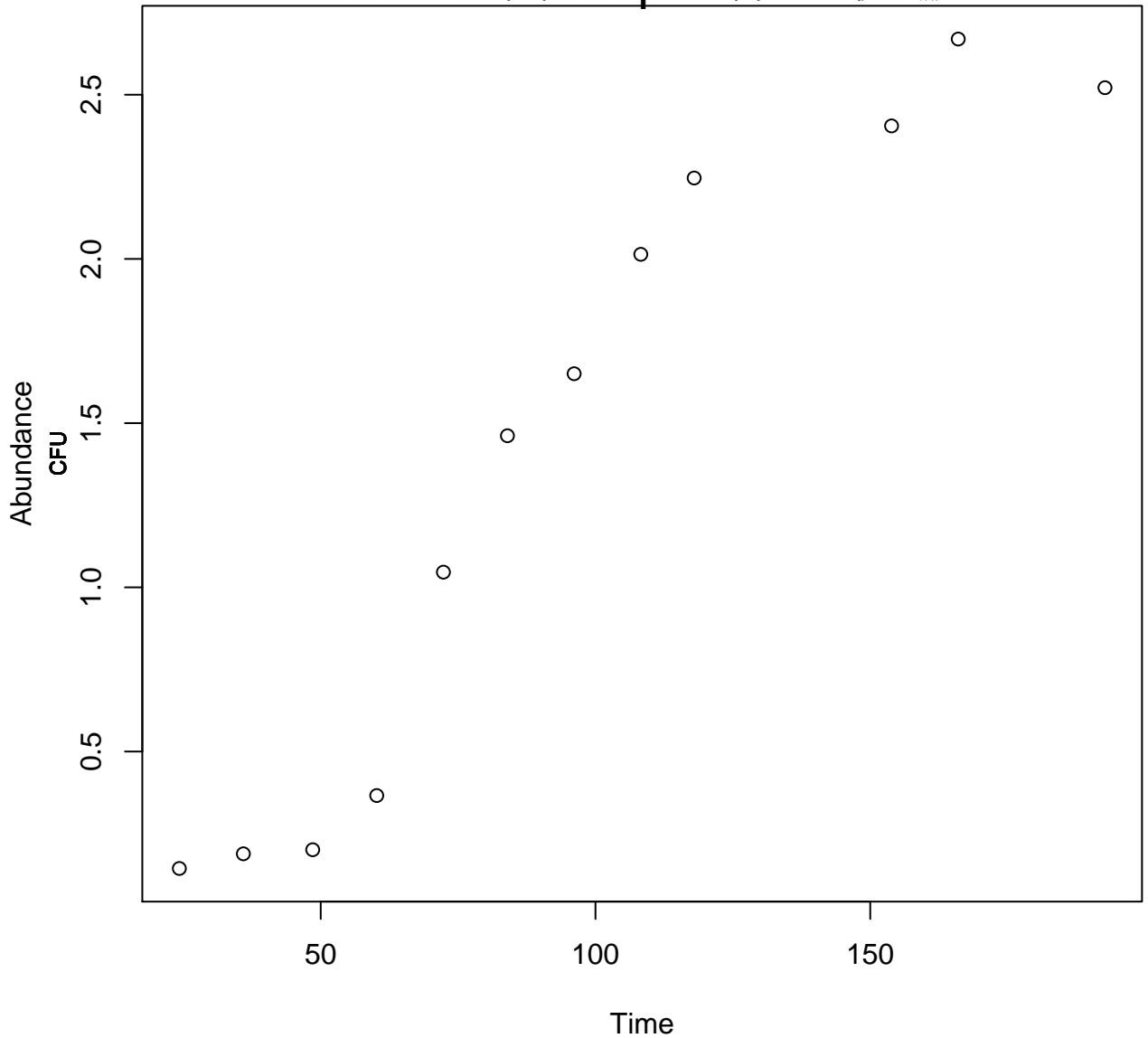
# Aerobic Psychotropic.

## Raw Chicken Breast

10

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



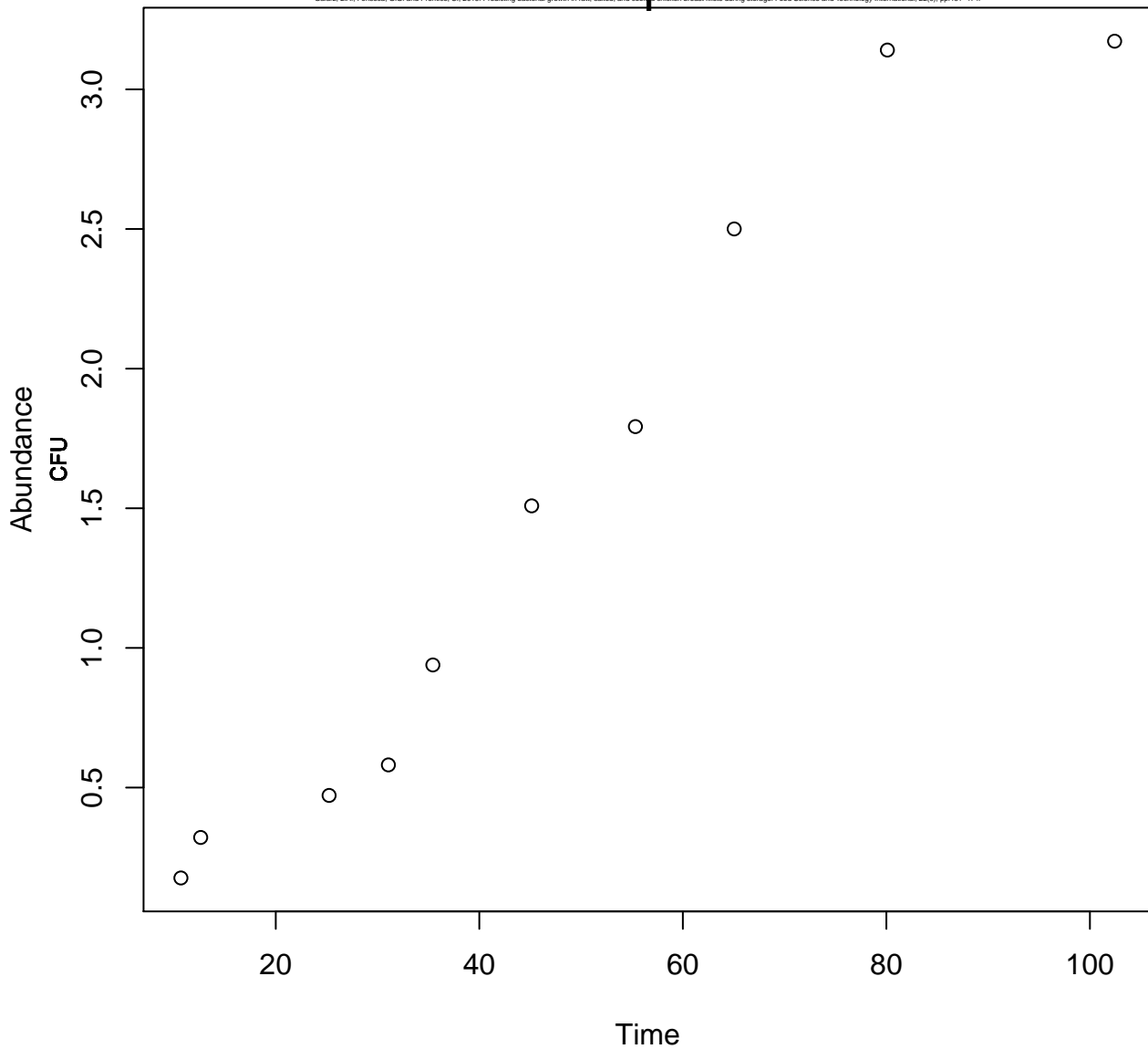
**Aerobic Psychotropic.**

**Raw Chicken Breast**

**15**

**1**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Aerobic Psychotropic.

## Raw Chicken Breast

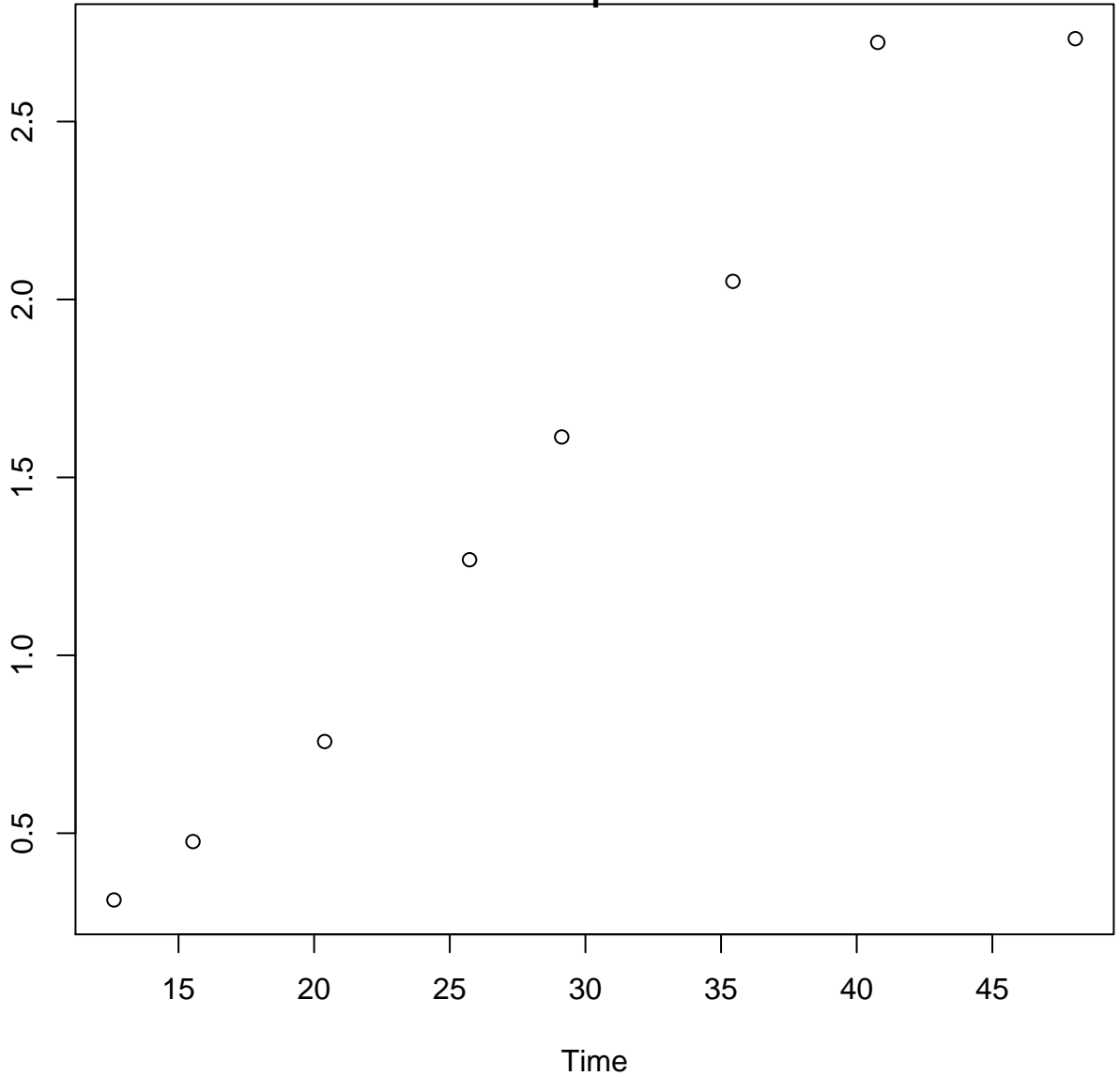
20

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

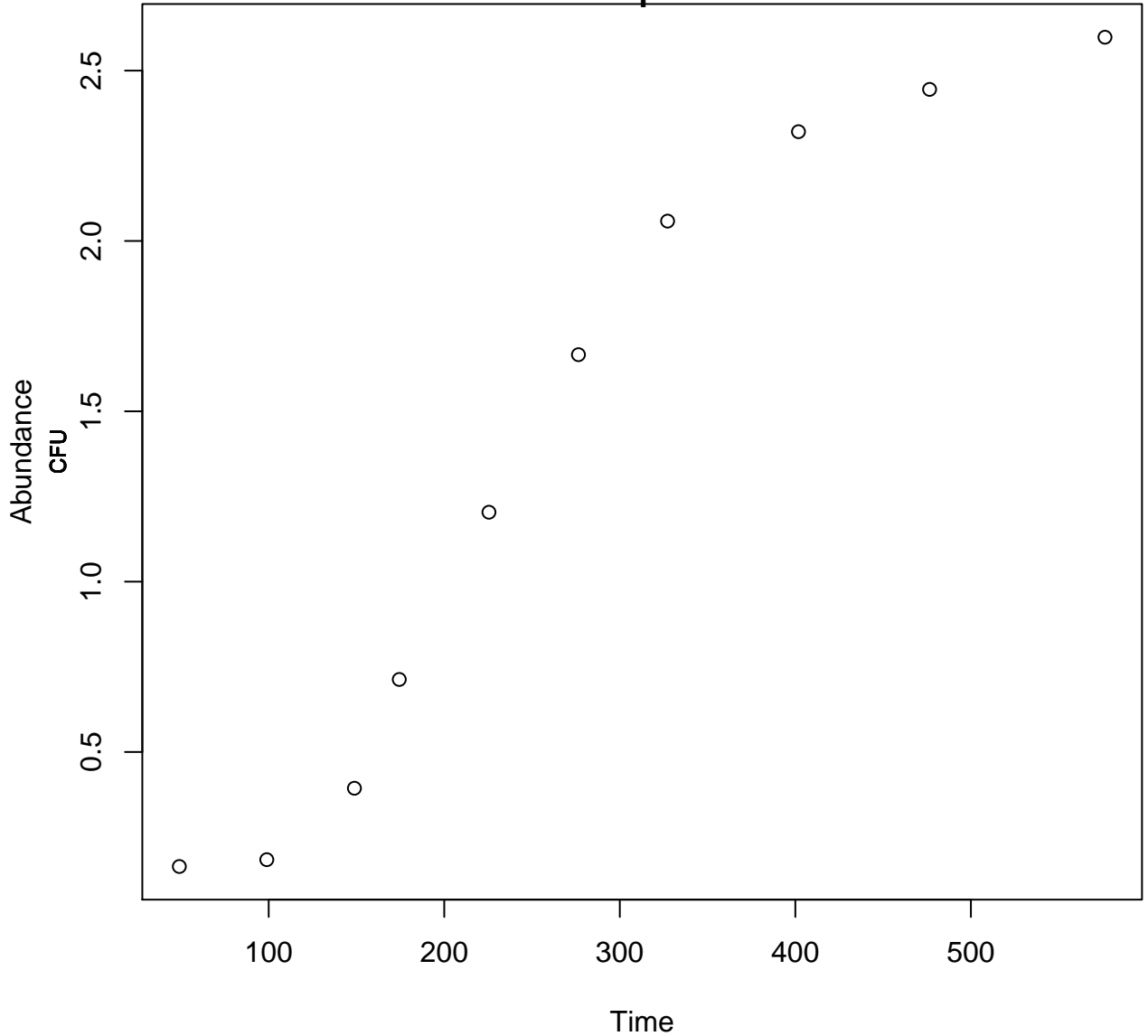


# Aerobic Psychotropic. Salted Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



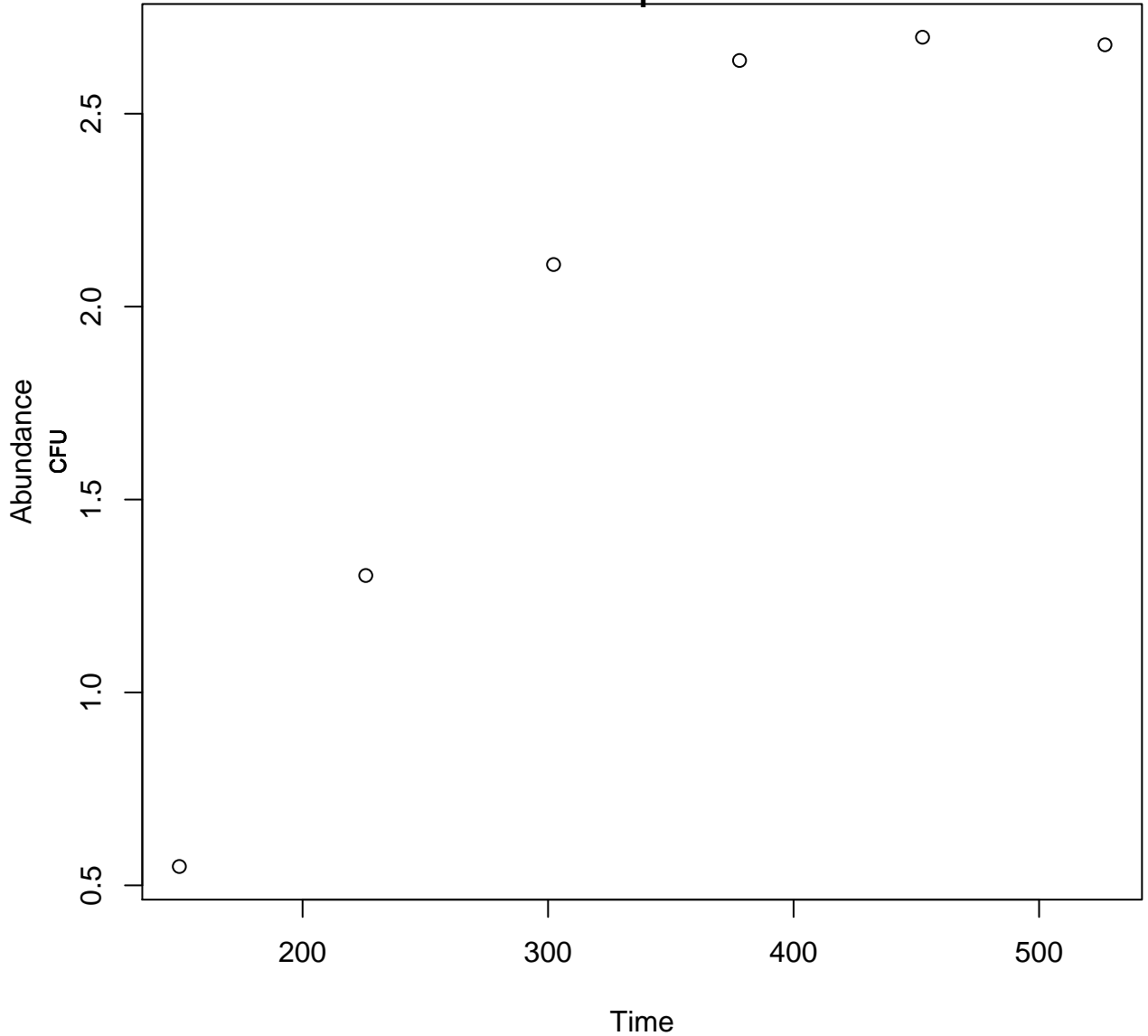


# Aerobic Psychotropic. Salted Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

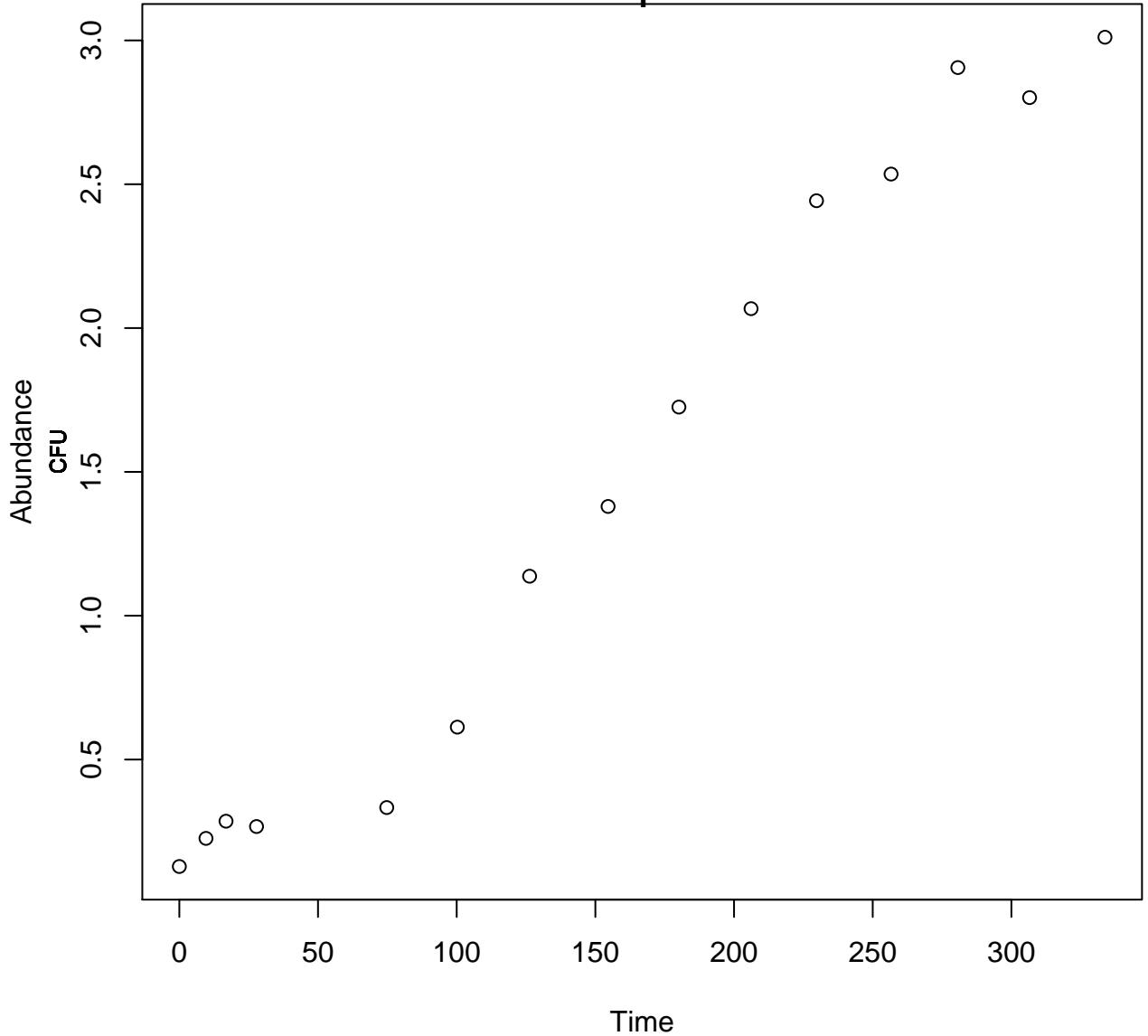


# Aerobic Psychotropic. Salted Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

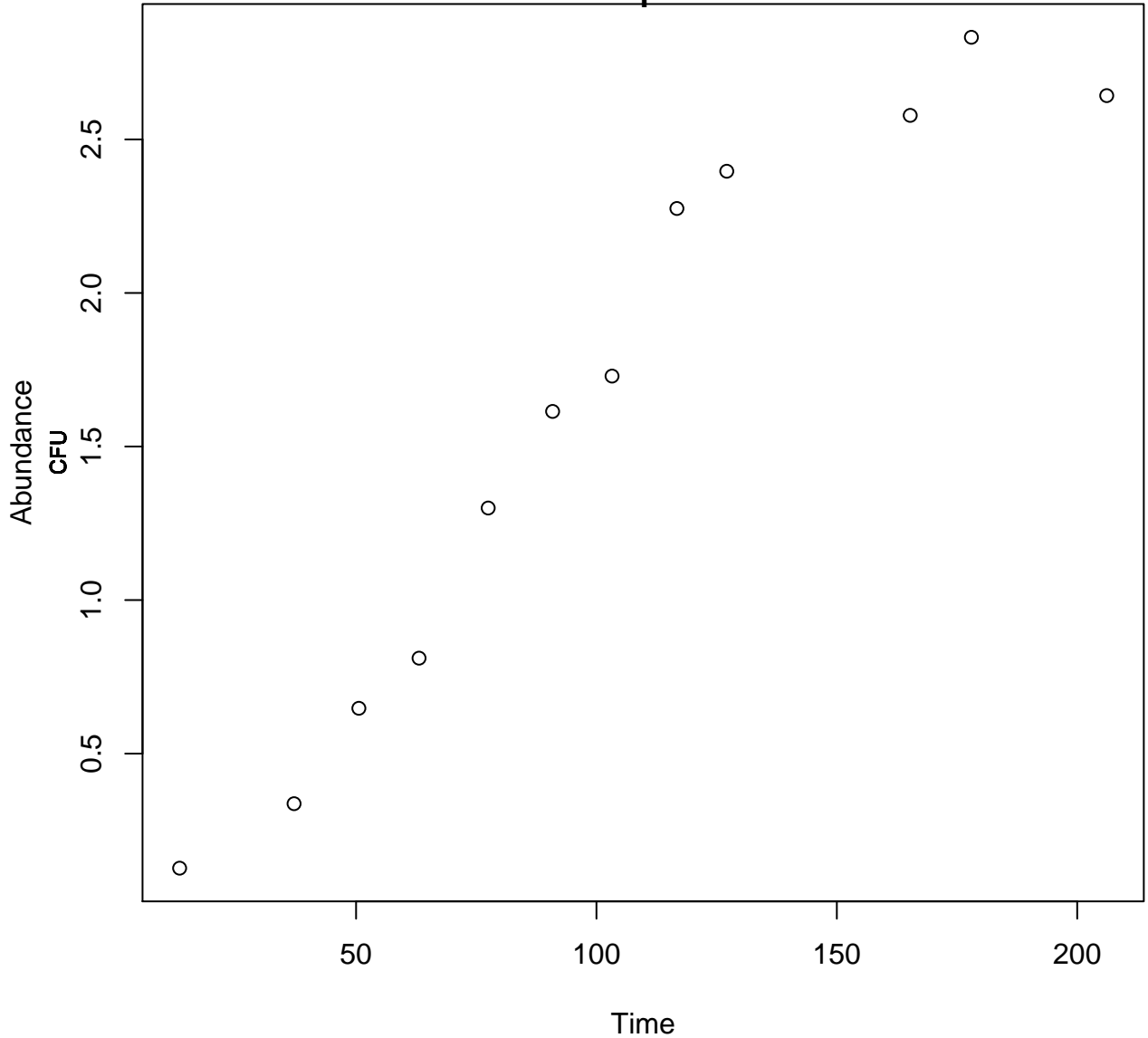


# Aerobic Psychotropic. Salted Chicken Breast

10

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.

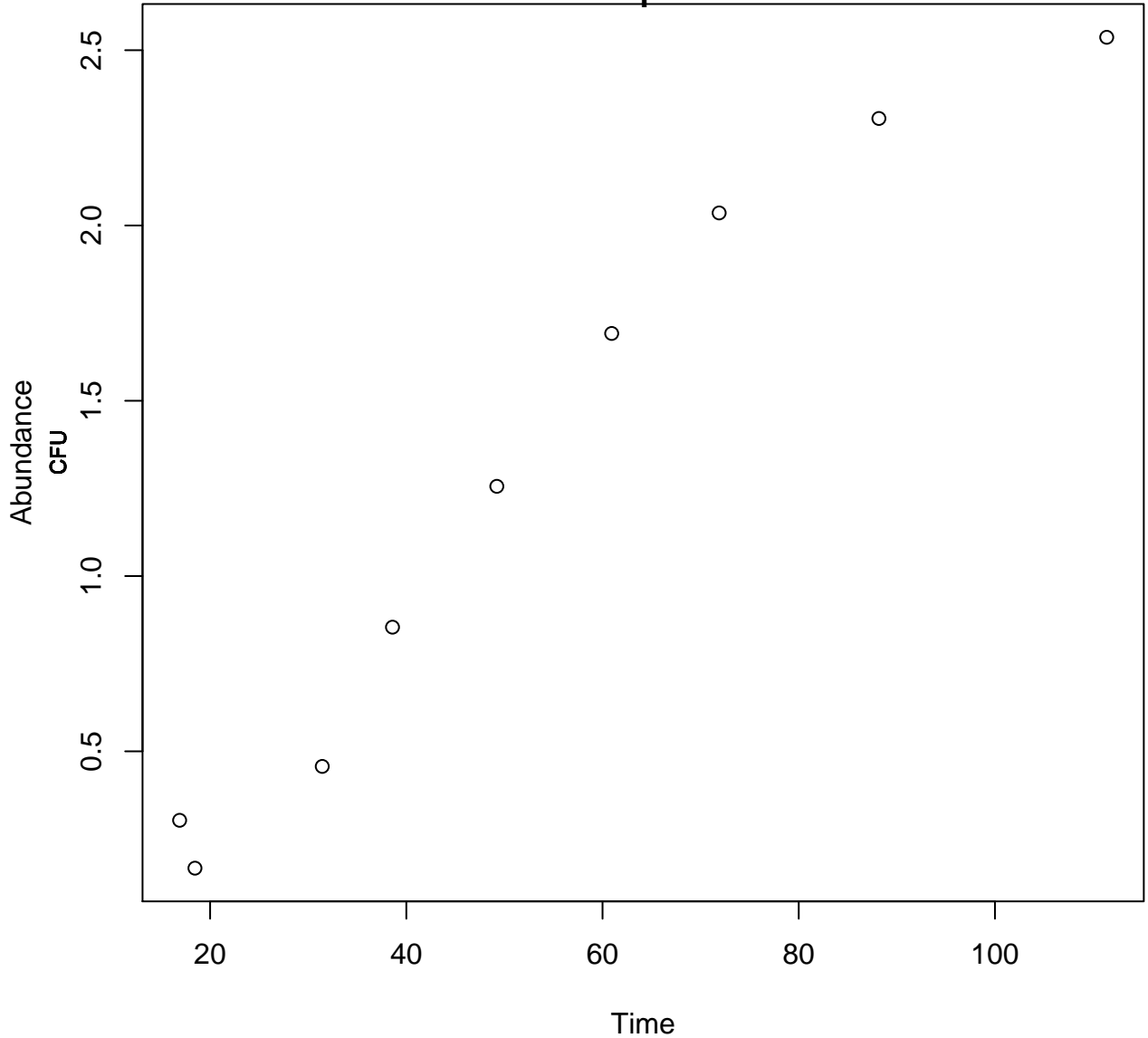


# Aerobic Psychotropic. Salted Chicken Breast

15

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Aerobic Psychotropic. Salted Chicken Breast

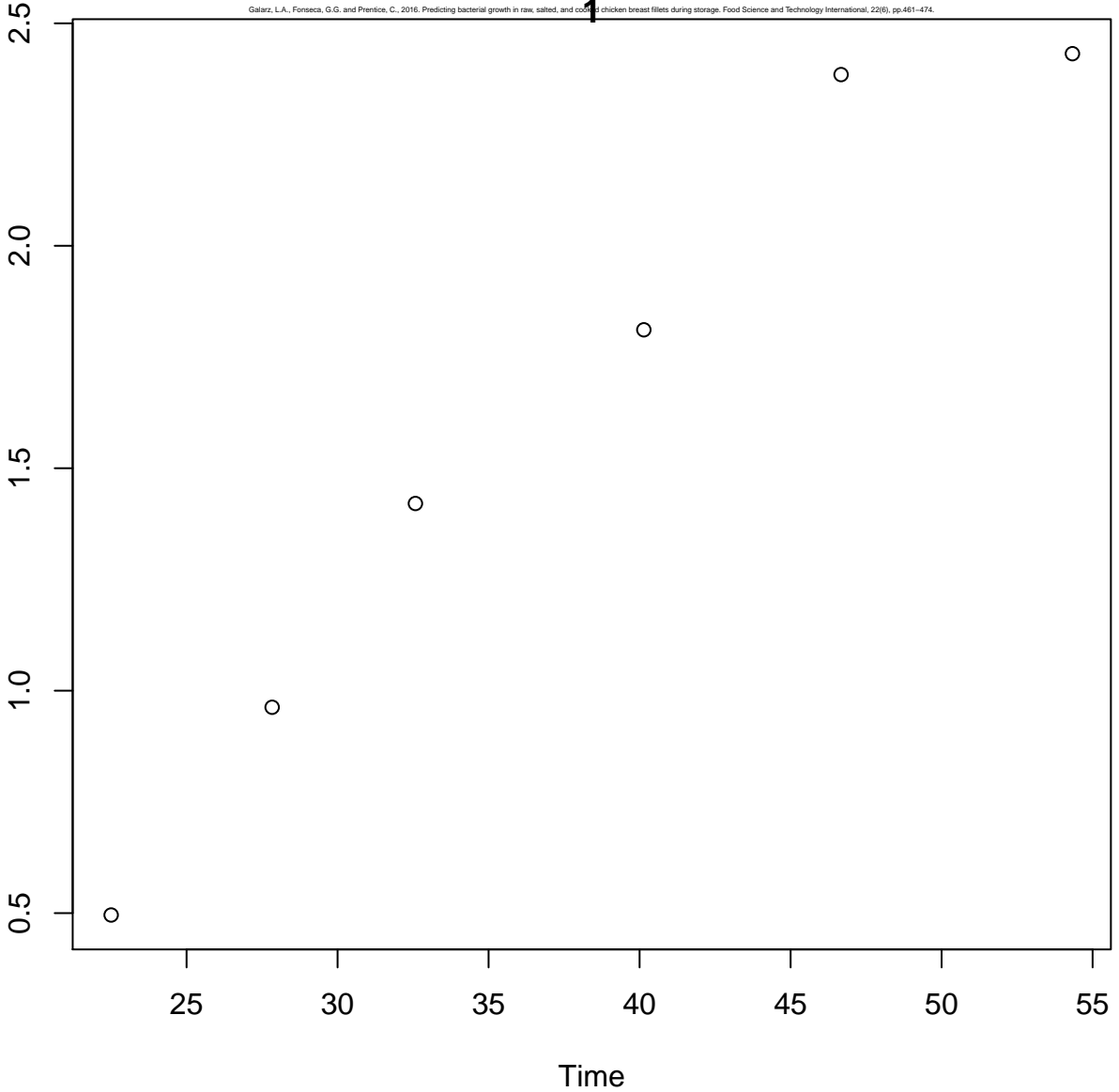
20

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

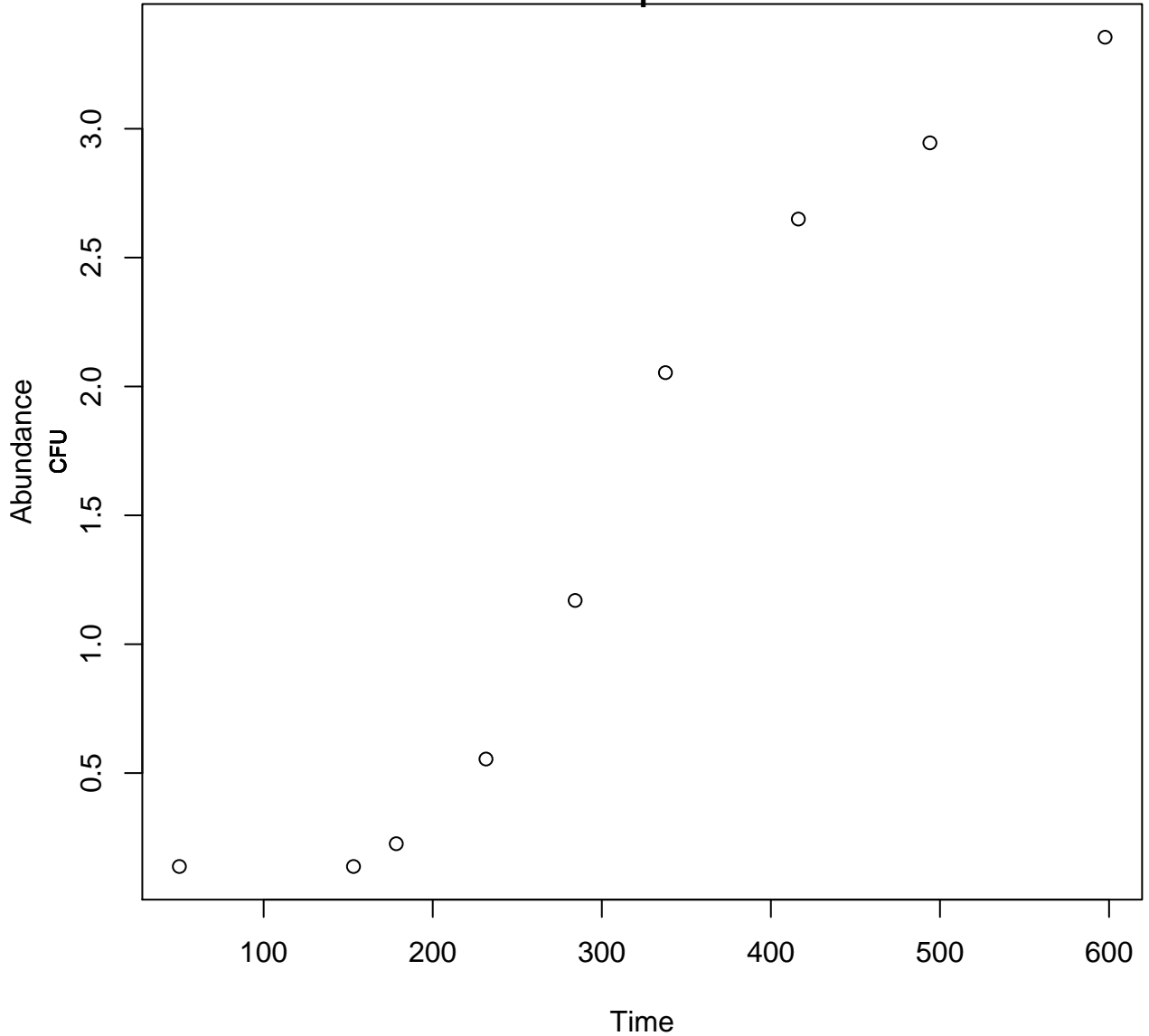


# Aerobic Psychotropic. Cooked Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

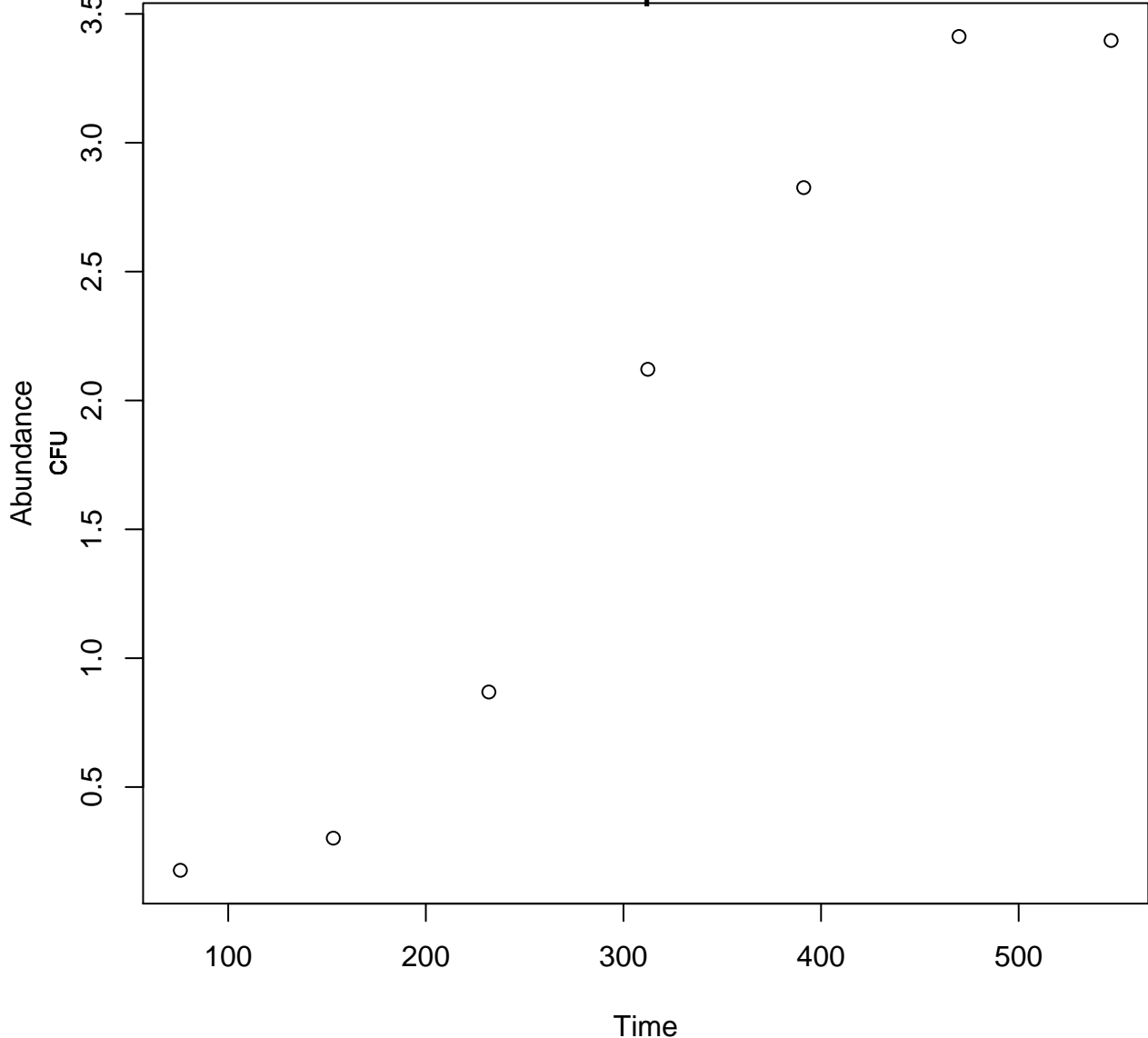


**Aerobic Psychotropic.  
Cooked Chicken Breast**

**4**

**1**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

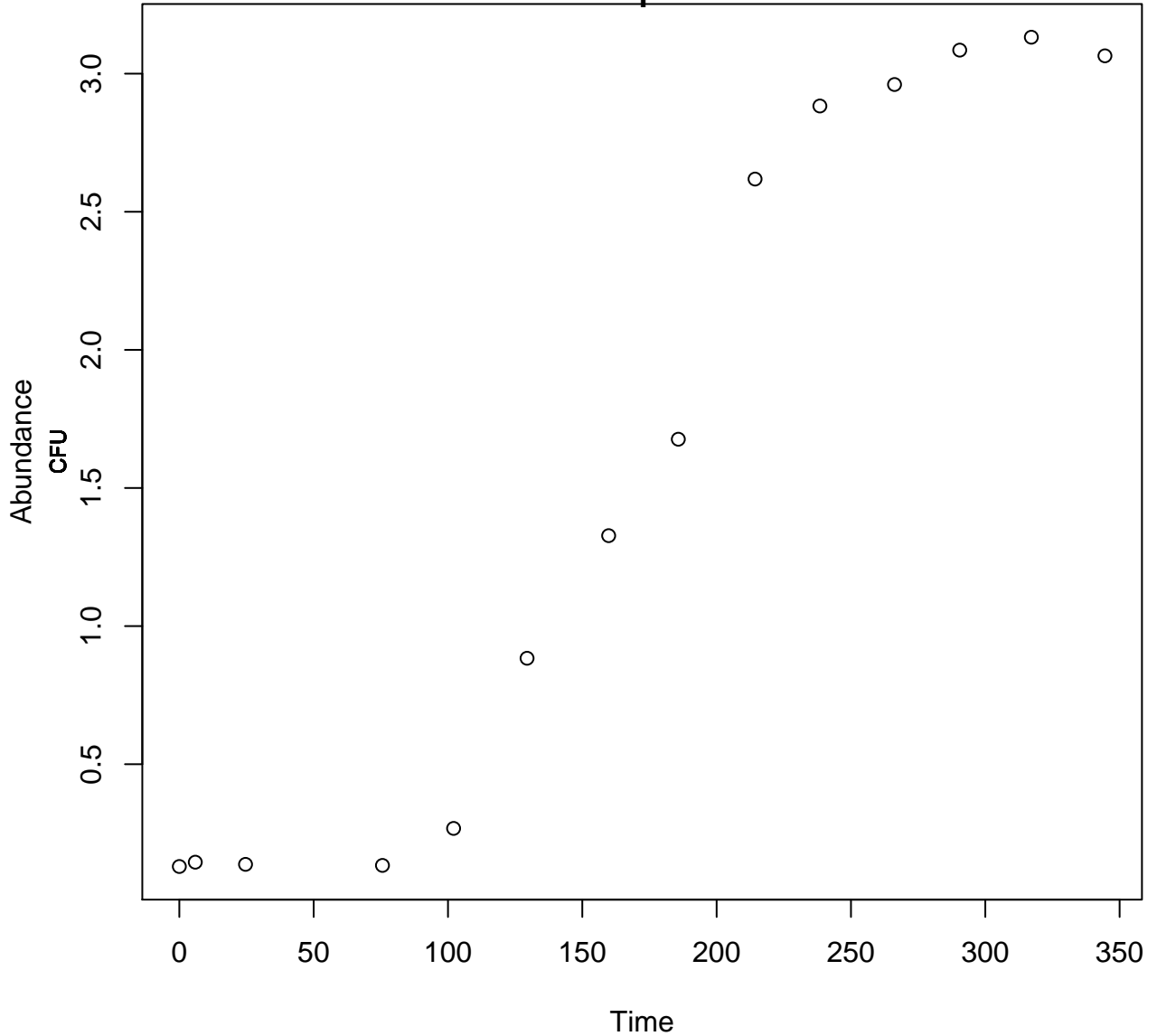


# Aerobic Psychotropic. Cooked Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



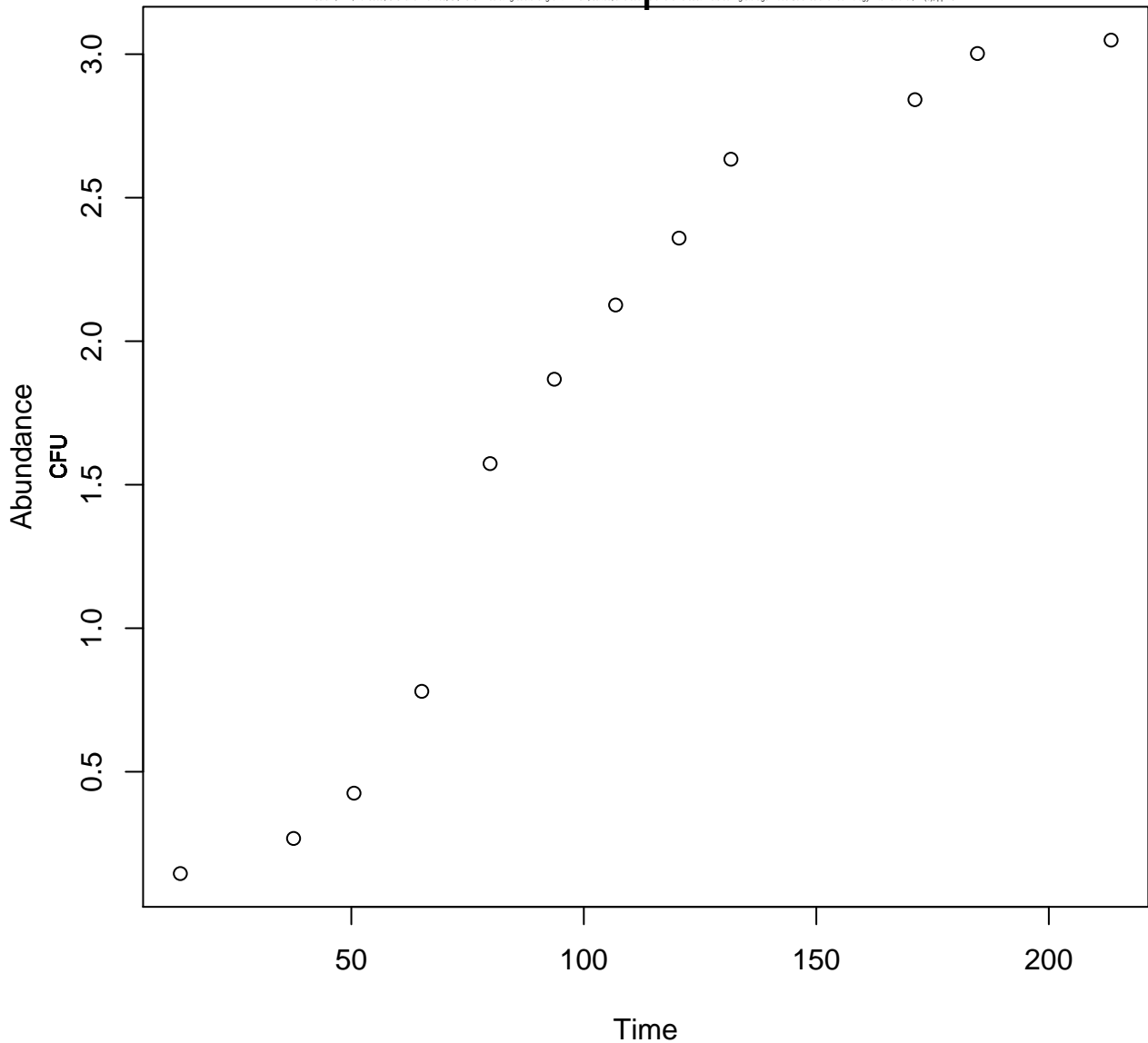


**Aerobic Psychotropic.  
Cooked Chicken Breast**

**10**

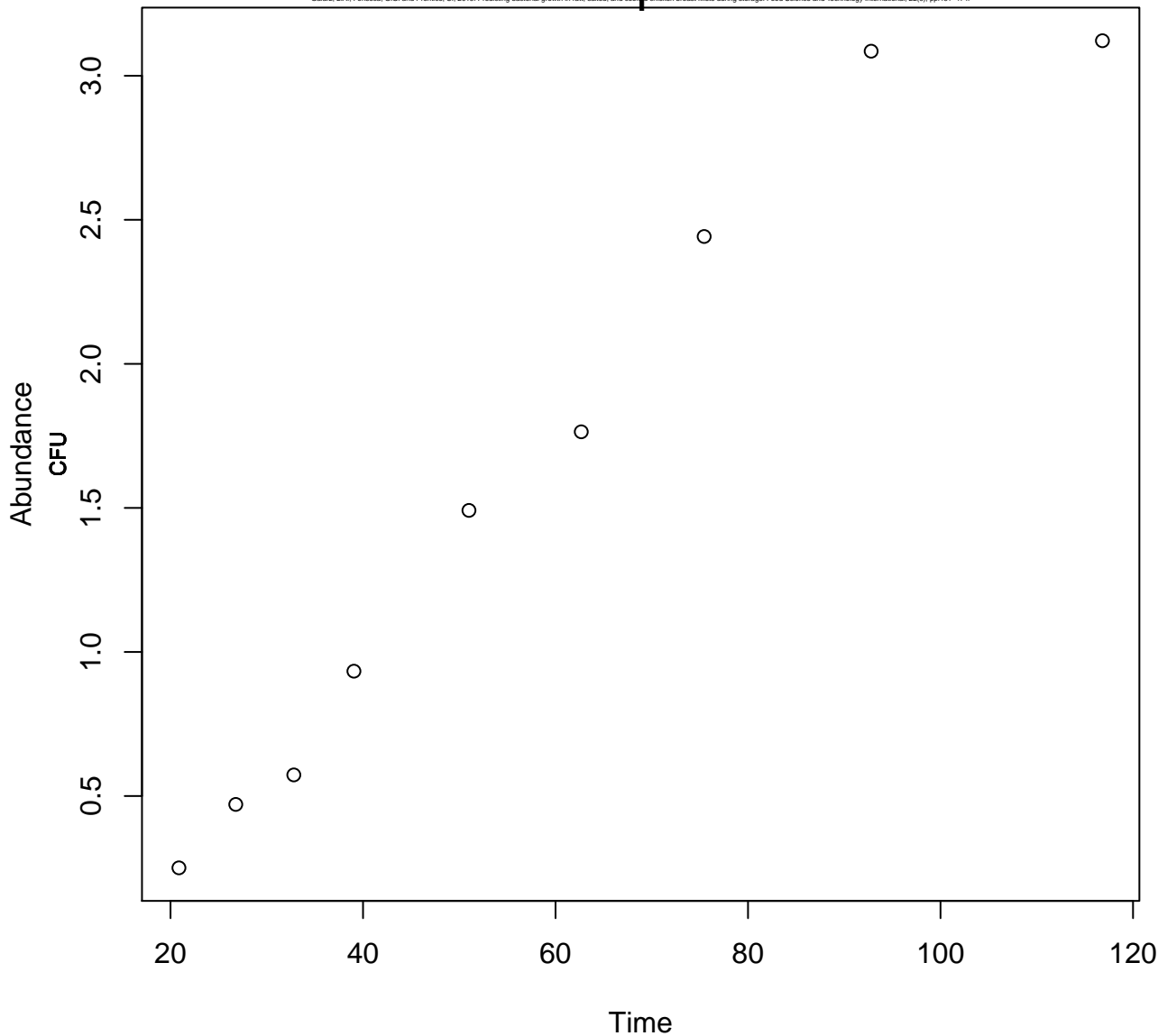
**1**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



**Aerobic Psychotropic.**  
**Cooked Chicken Breast**  
**15**

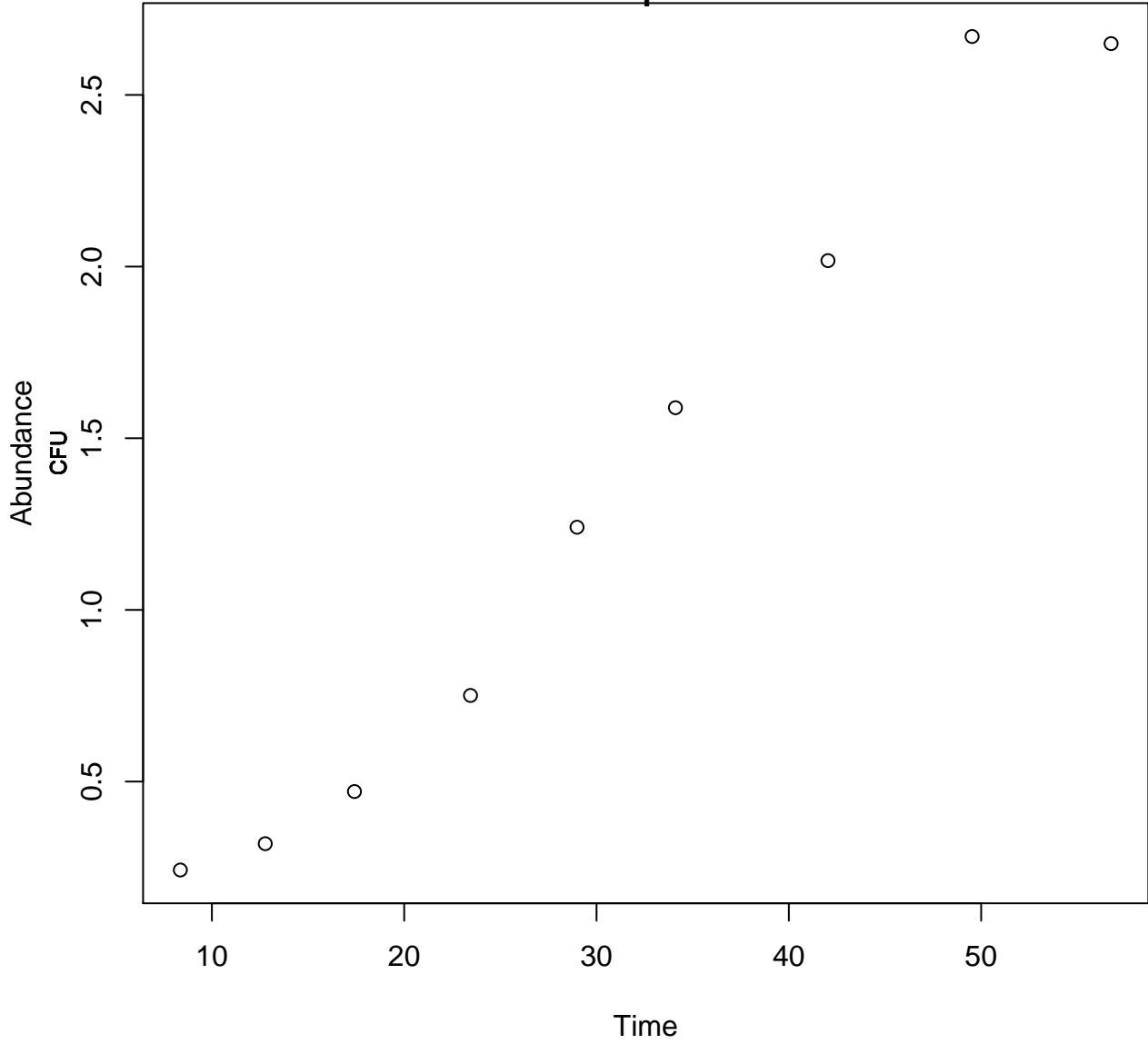
Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



**Aerobic Psychotropic.**  
**Cooked Chicken Breast**  
**20**

**1**

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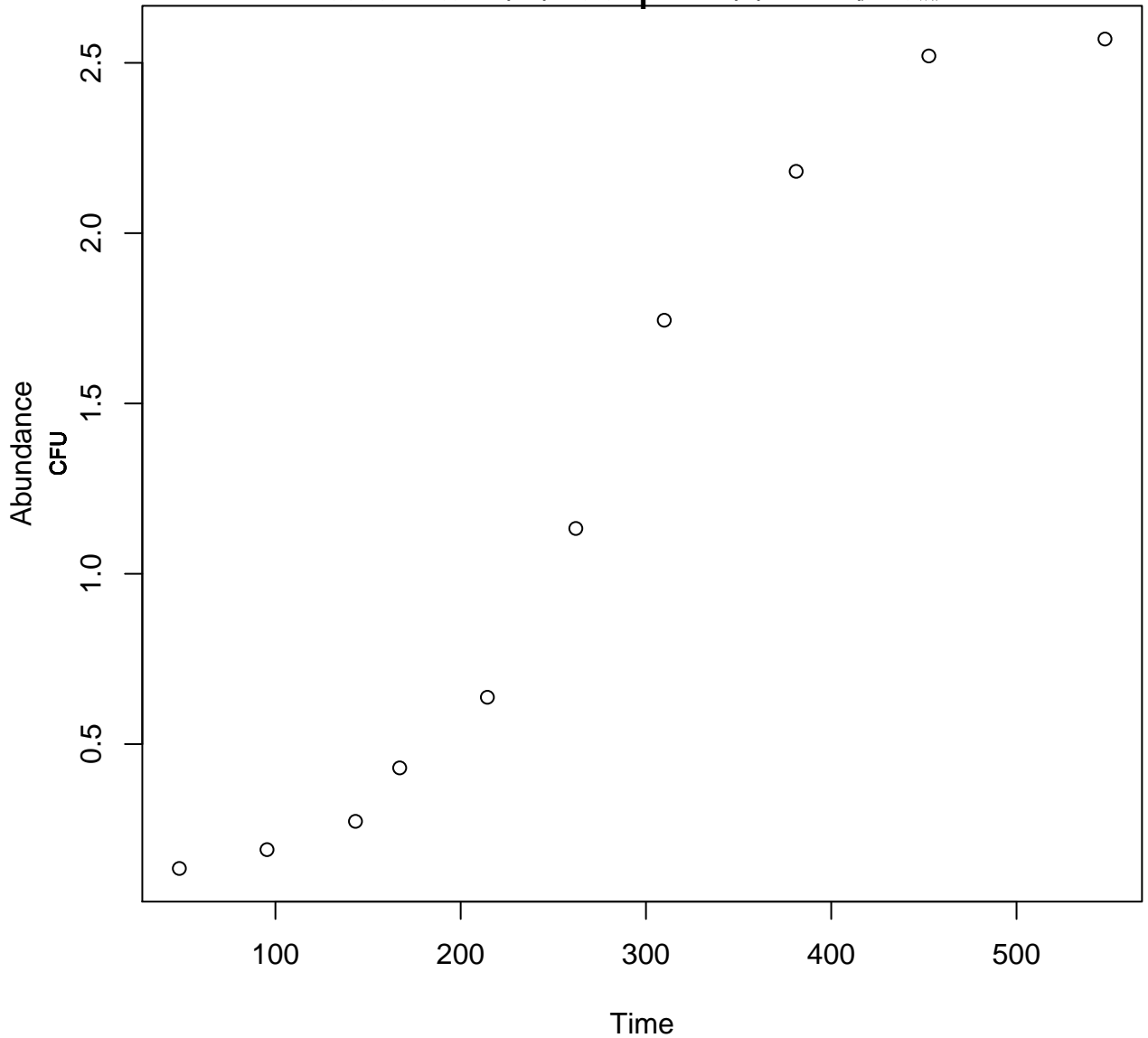


# Aerobic Mesophilic. Raw Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

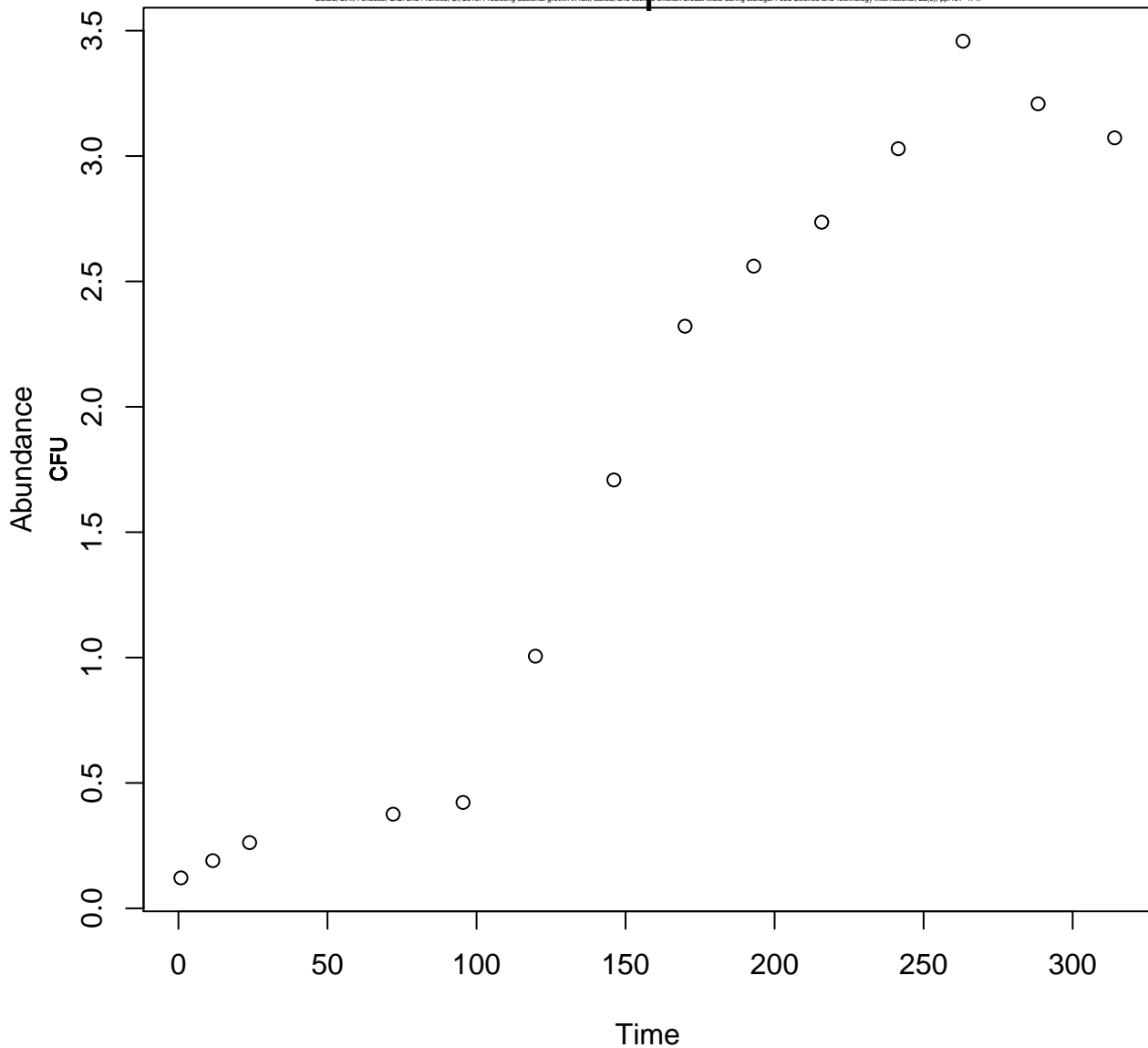


# Aerobic Mesophilic. Raw Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

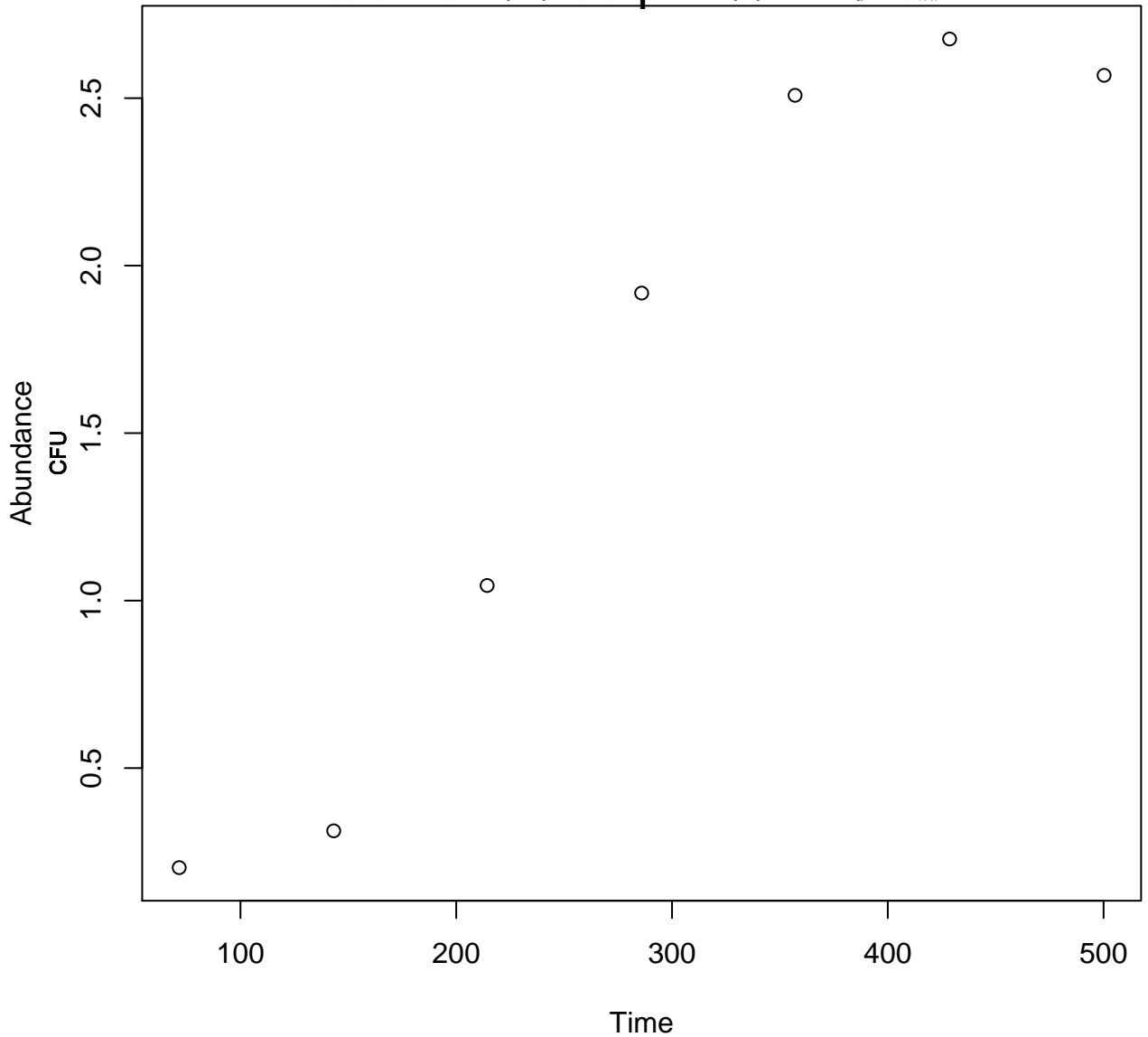


# Aerobic Mesophilic. Raw Chicken Breast

4

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Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

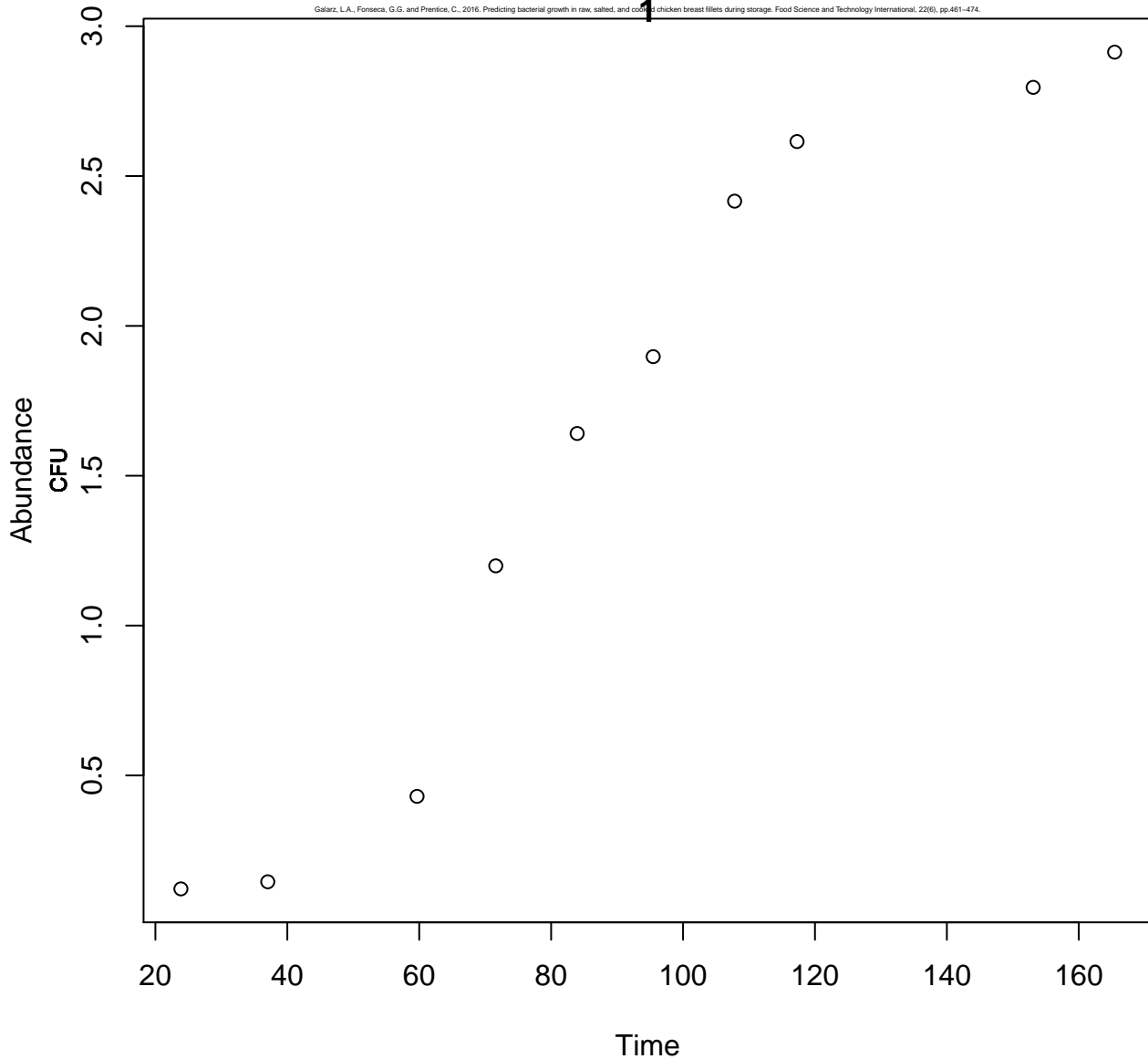


# Aerobic Mesophilic. Raw Chicken Breast

10

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

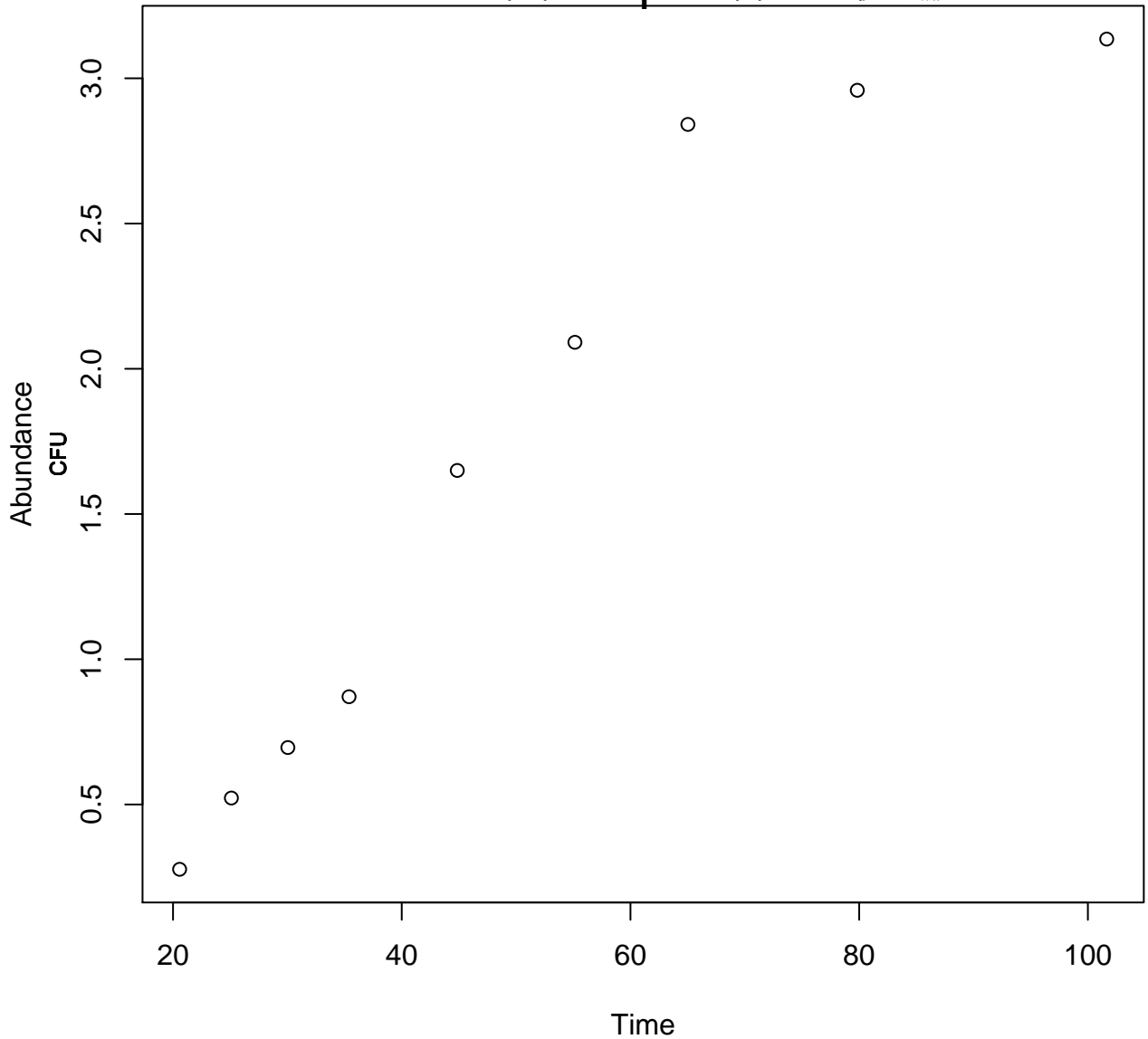


# Aerobic Mesophilic. Raw Chicken Breast

15

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



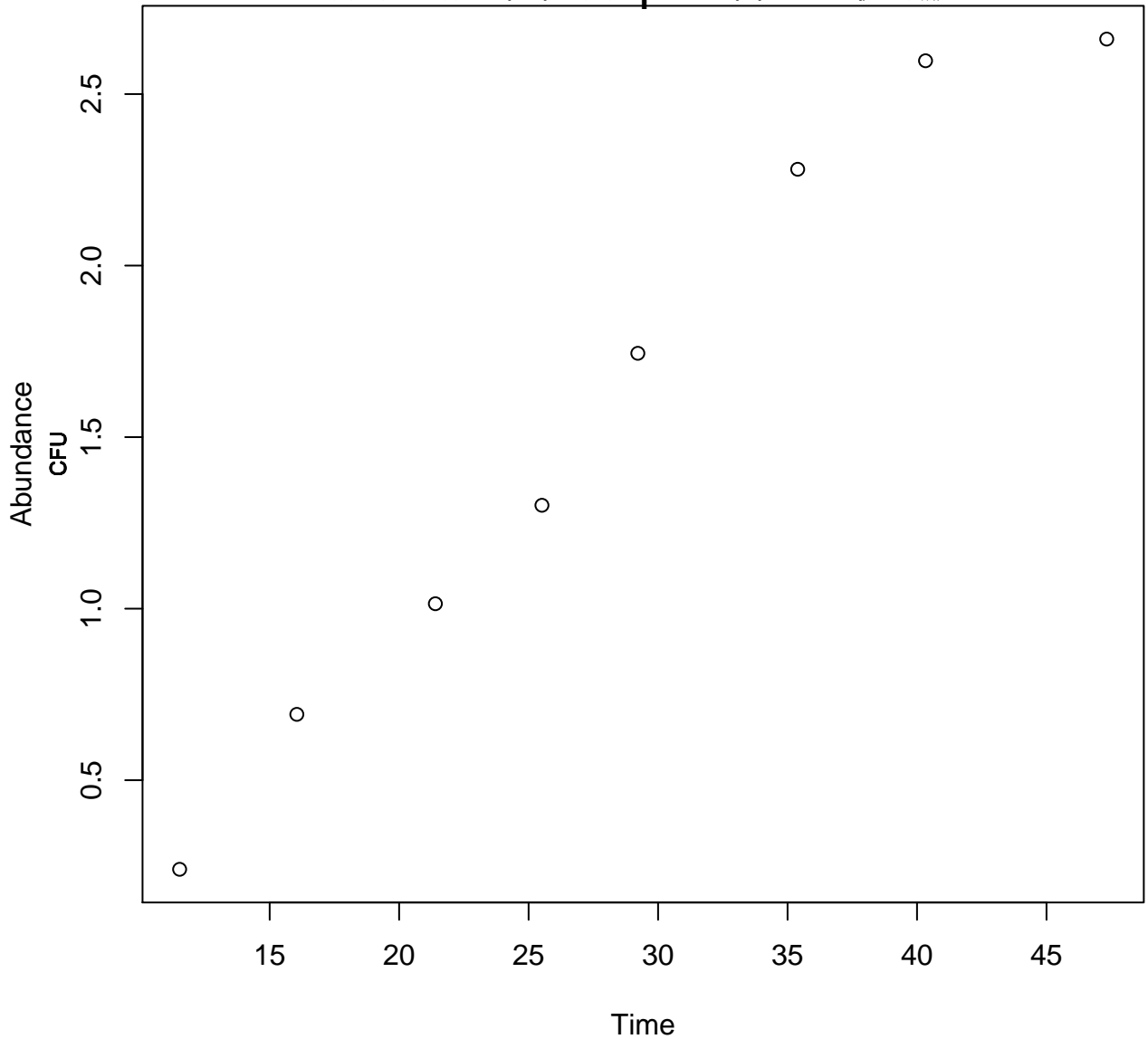


# Aerobic Mesophilic. Raw Chicken Breast

20

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

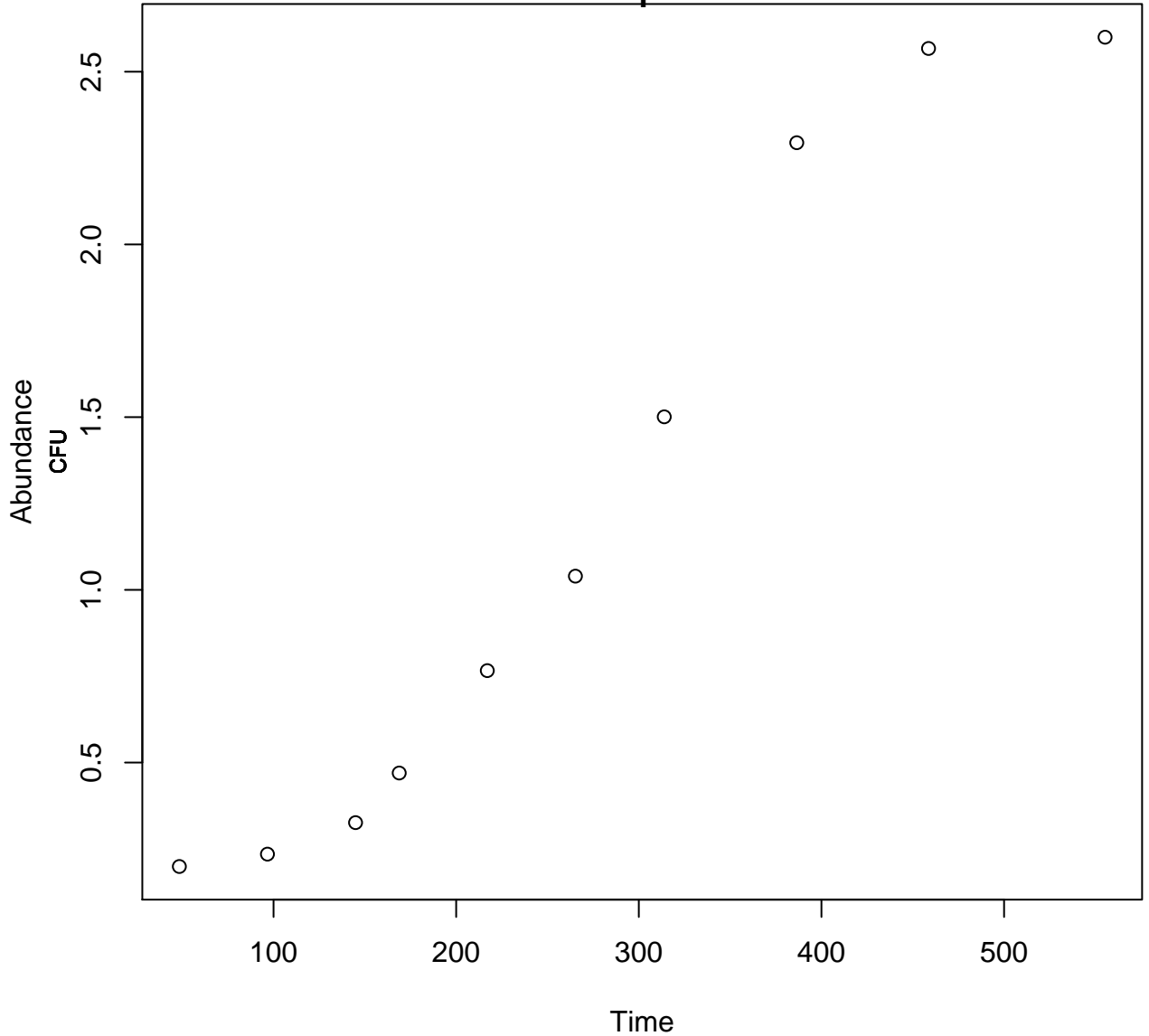


# Aerobic Mesophilic. Salted Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.

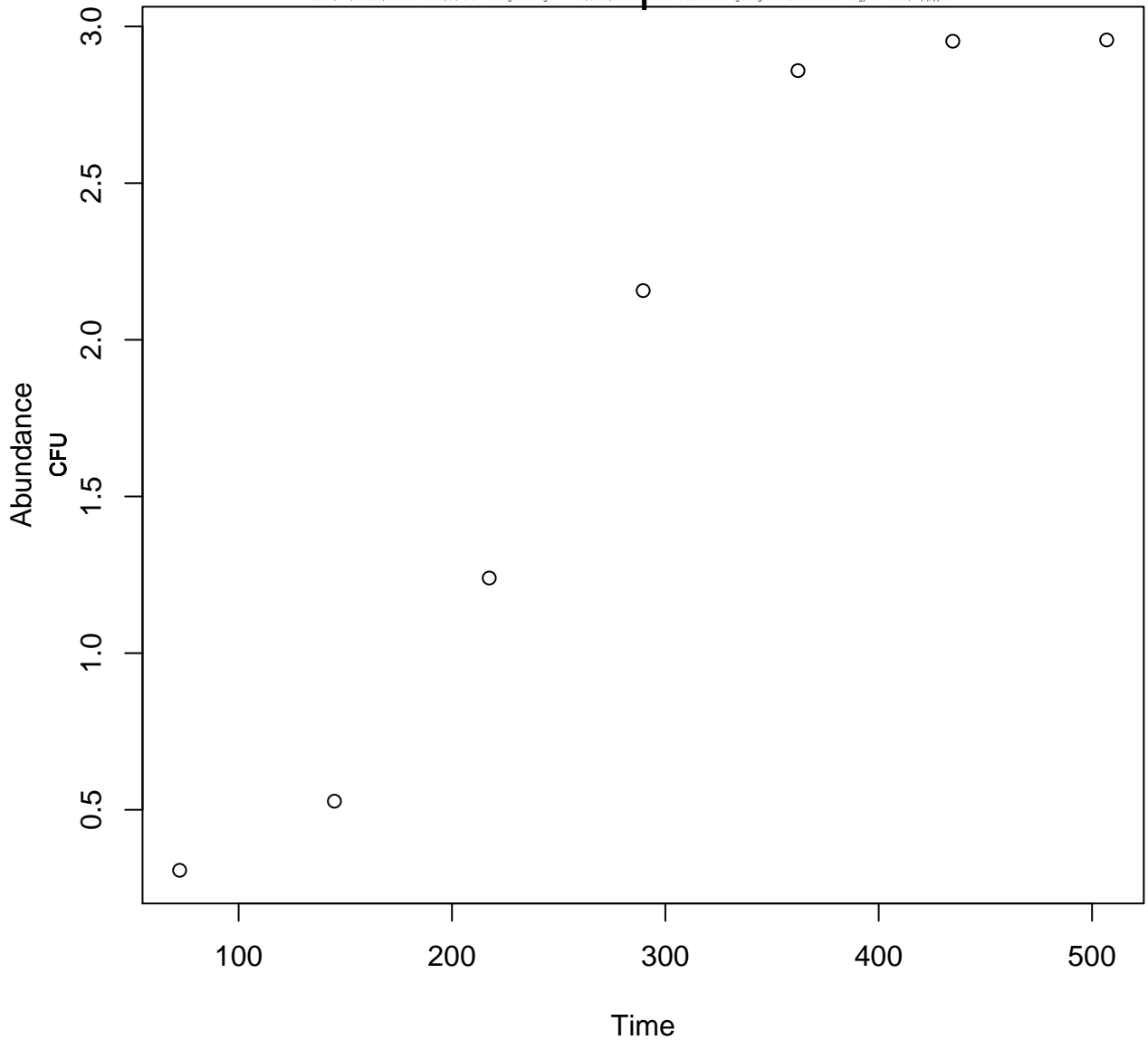


# Aerobic Mesophilic. Salted Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

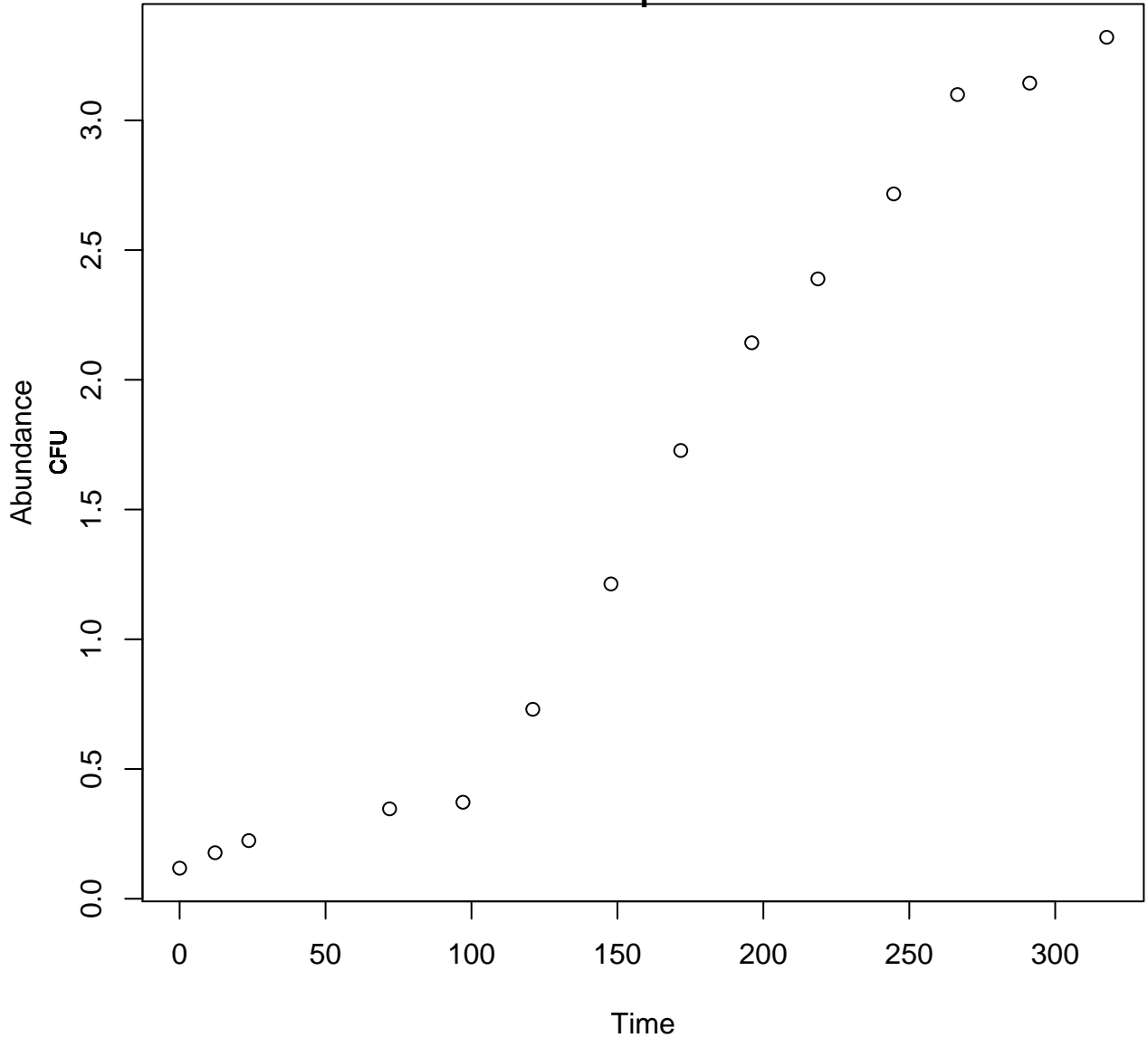


# Aerobic Mesophilic. Salted Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

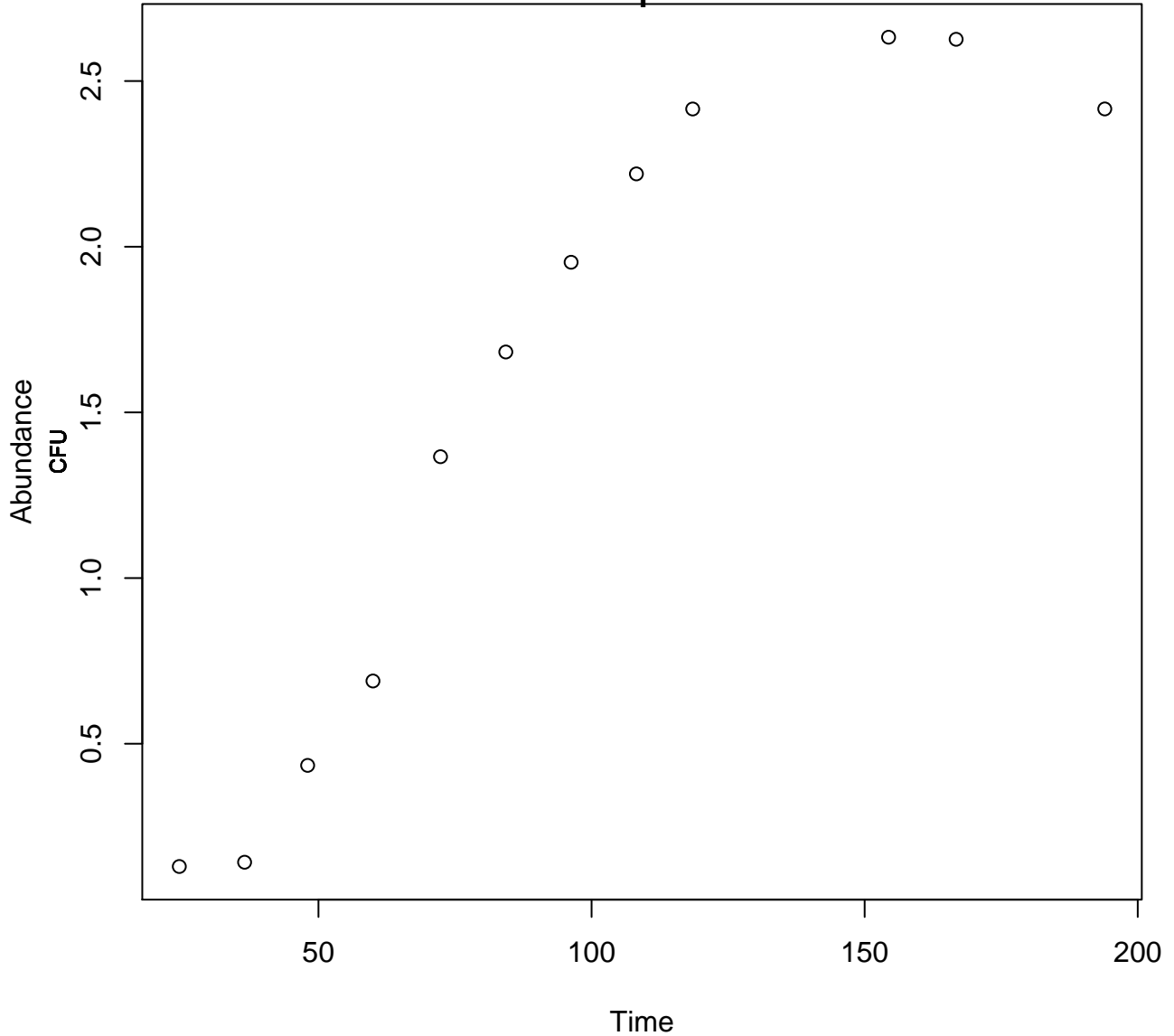


# Aerobic Mesophilic. Salted Chicken Breast

10

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

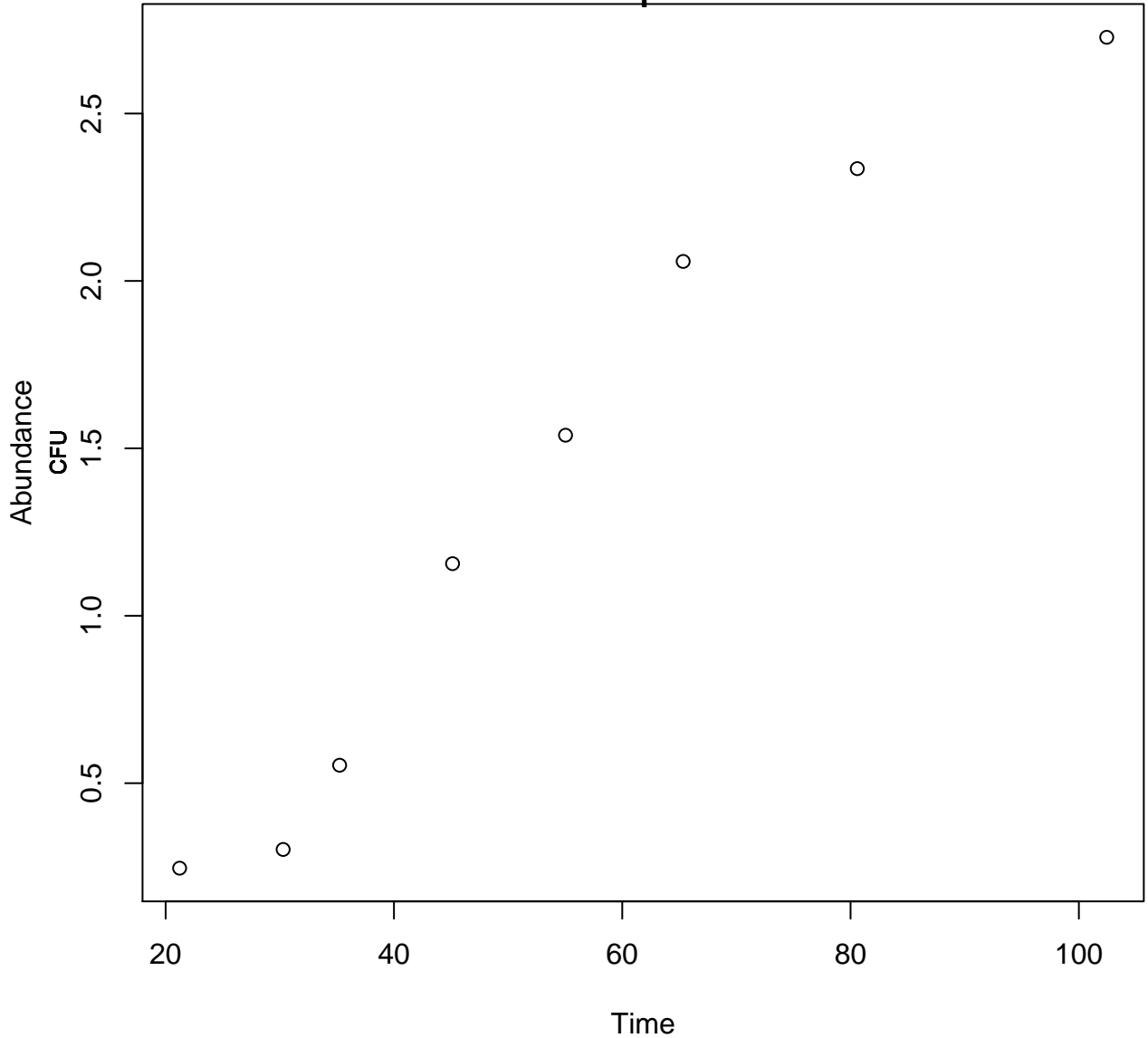


# Aerobic Mesophilic. Salted Chicken Breast

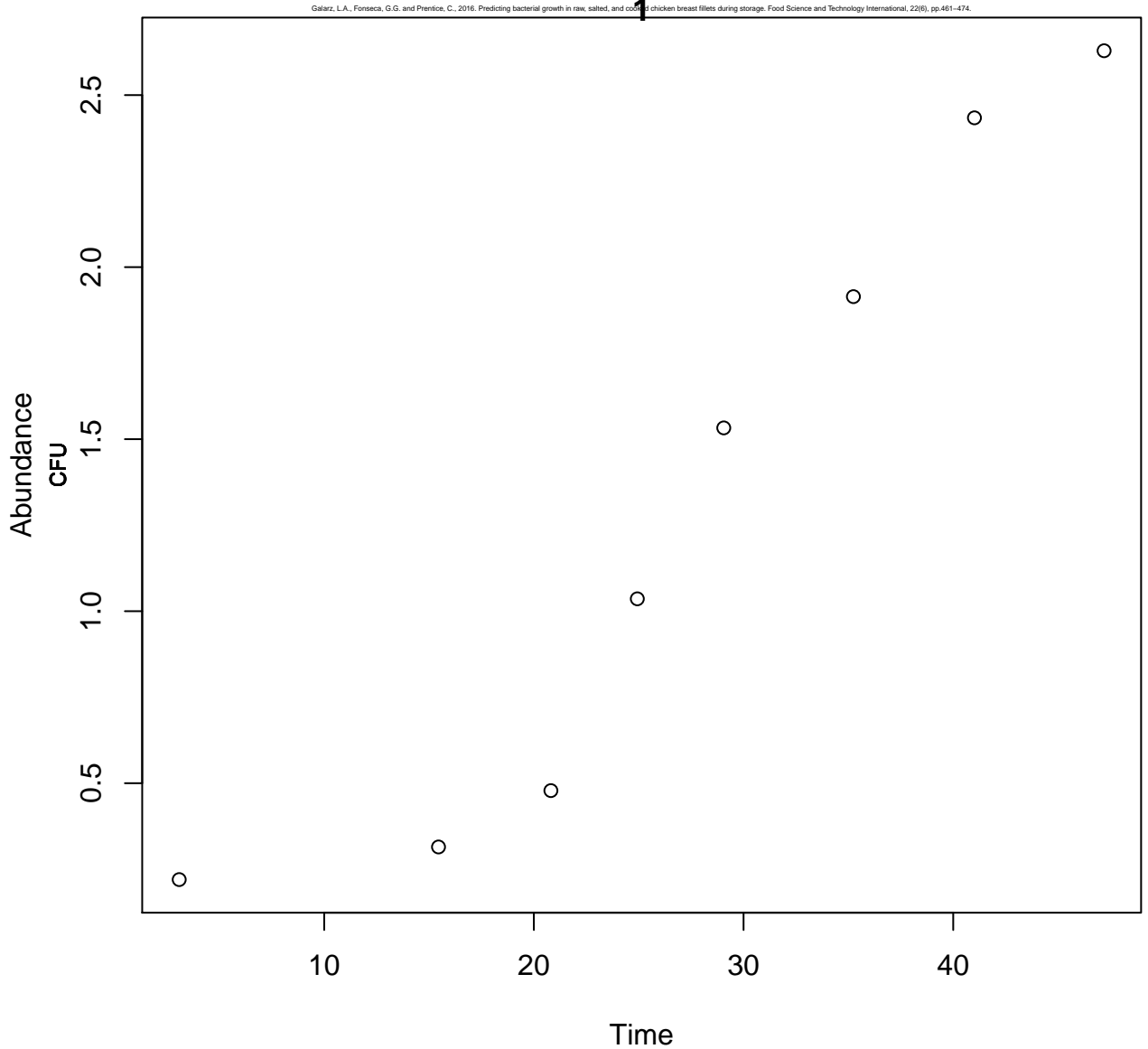
15

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Aerobic Mesophilic. Salted Chicken Breast

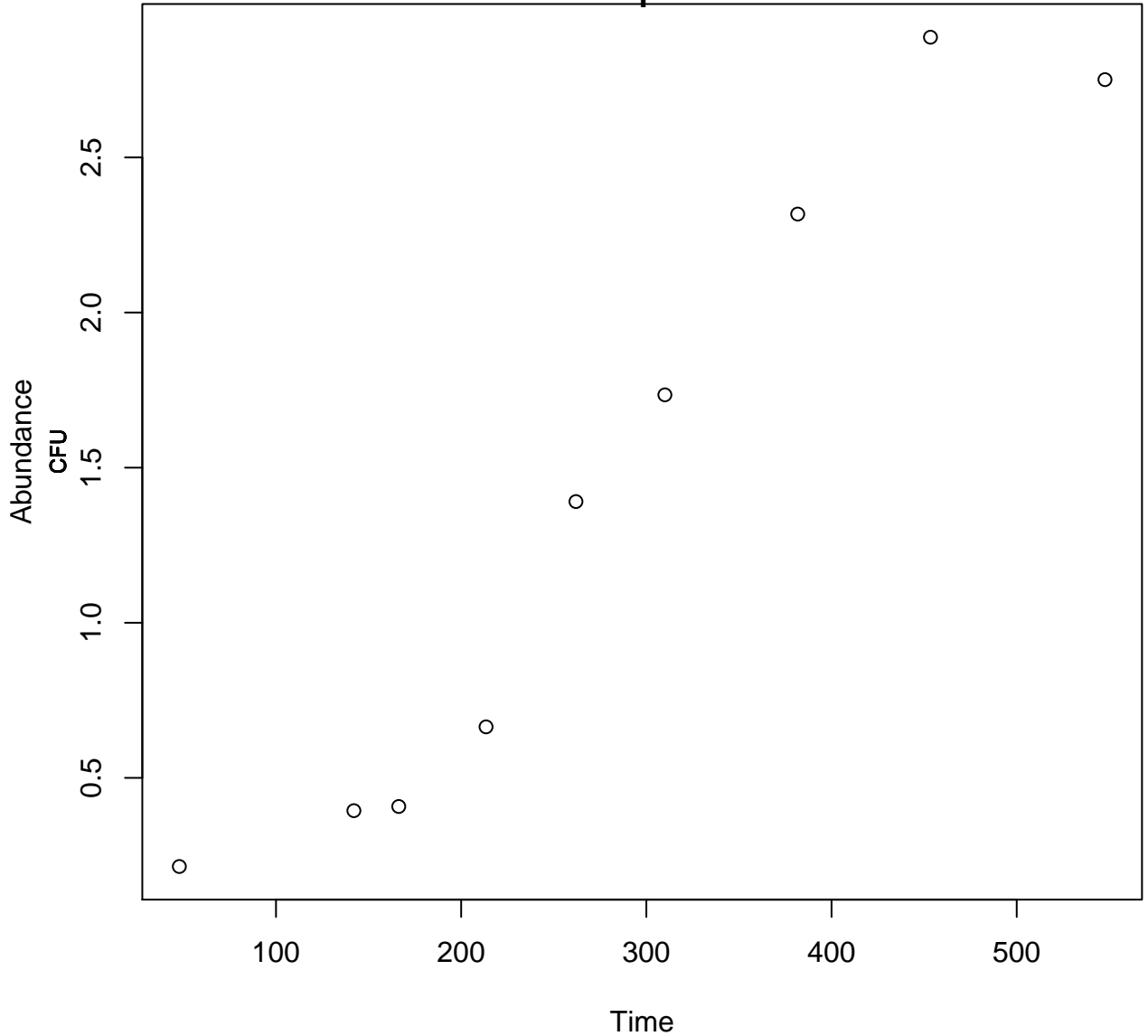


# Aerobic Mesophilic. Cooked Chicken Breast

2

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.





# Aerobic Mesophilic. Cooked Chicken Breast

4

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

4

3

2

1

150

200

250

300

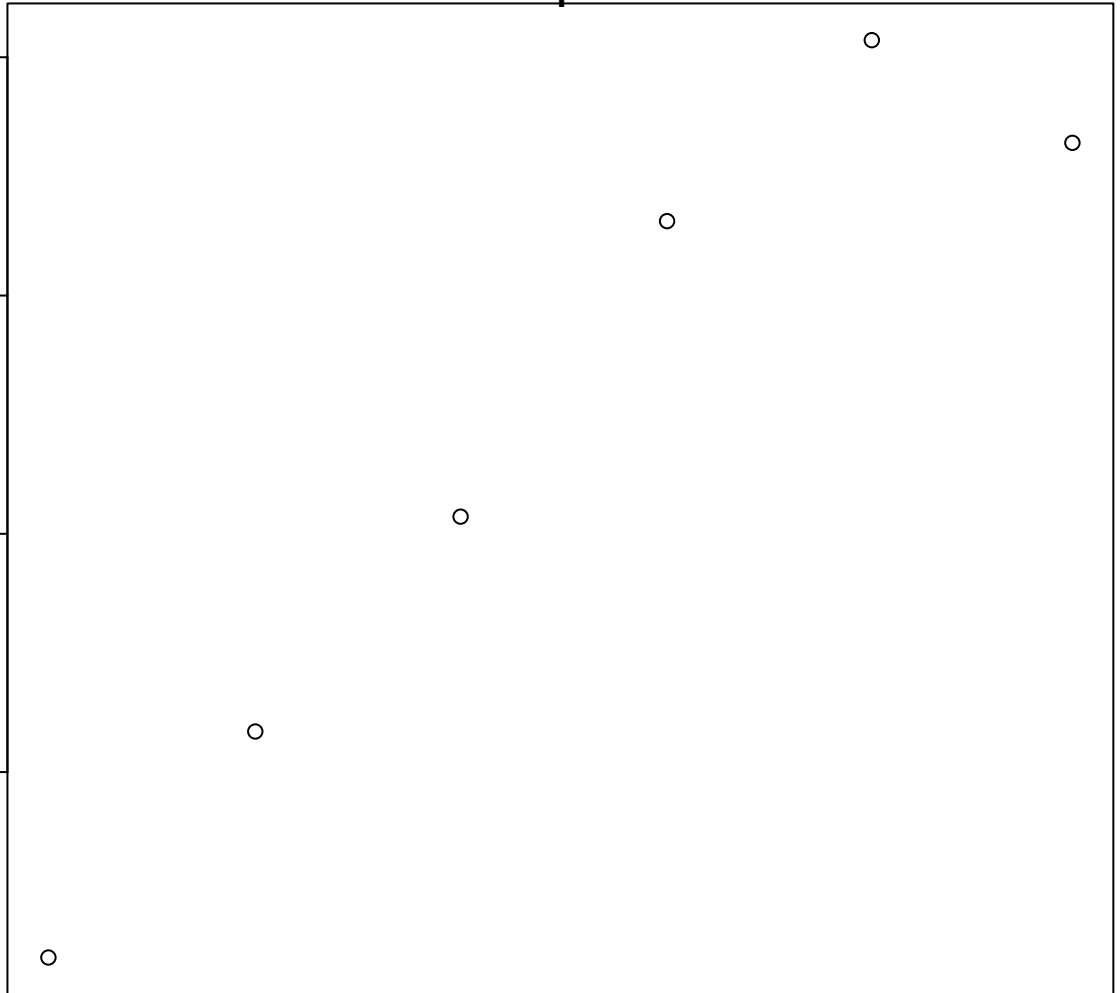
350

400

450

500

Time

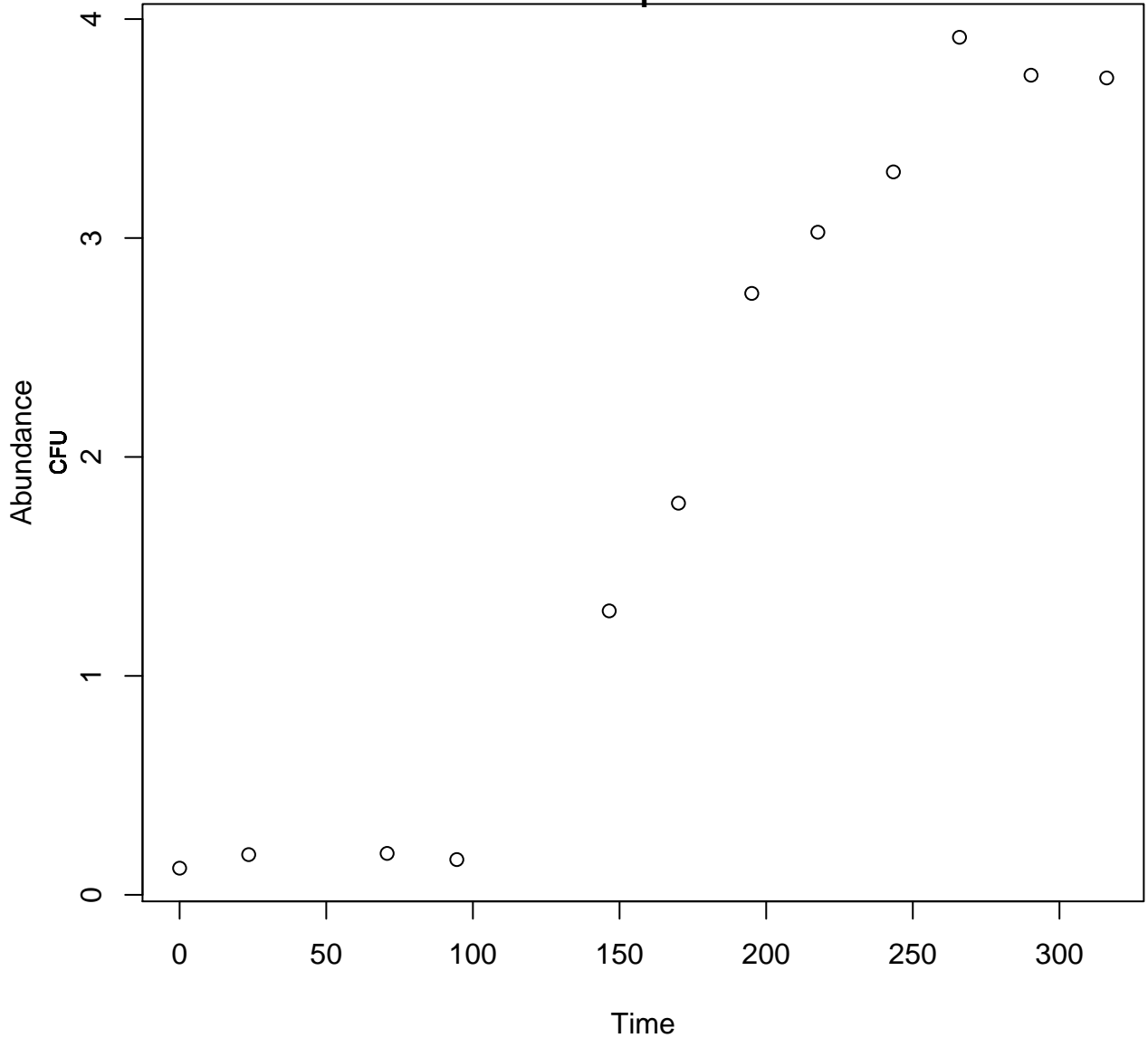


# Aerobic Mesophilic. Cooked Chicken Breast

7

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

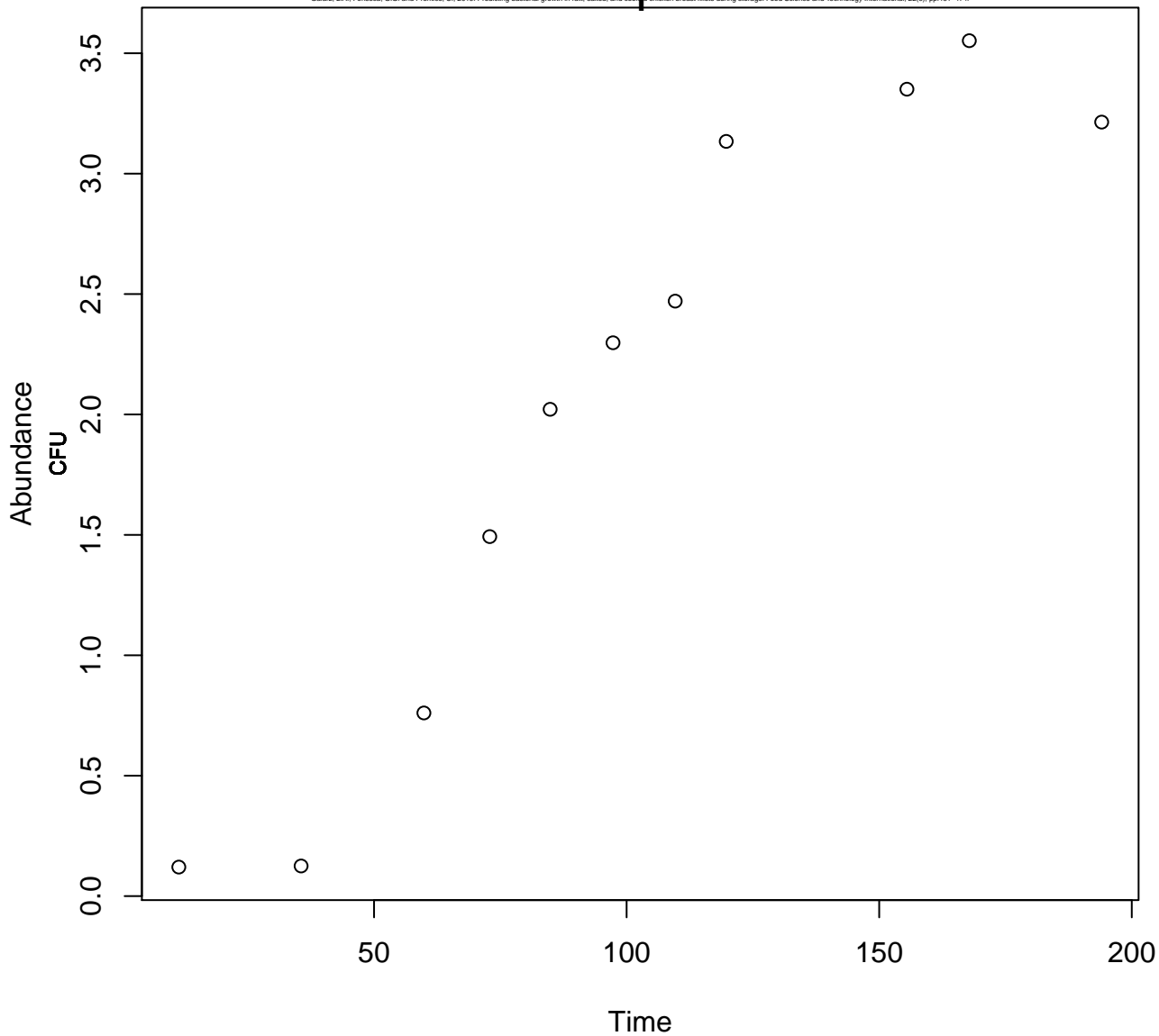


# Aerobic Mesophilic. Cooked Chicken Breast

10

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.



# Aerobic Mesophilic. Cooked Chicken Breast

15

1

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast fillets during storage. Food Science and Technology International, 22(6), pp.461-474.

Abundance

CFU

3.5  
3.0  
2.5  
2.0  
1.5  
1.0  
0.5

20

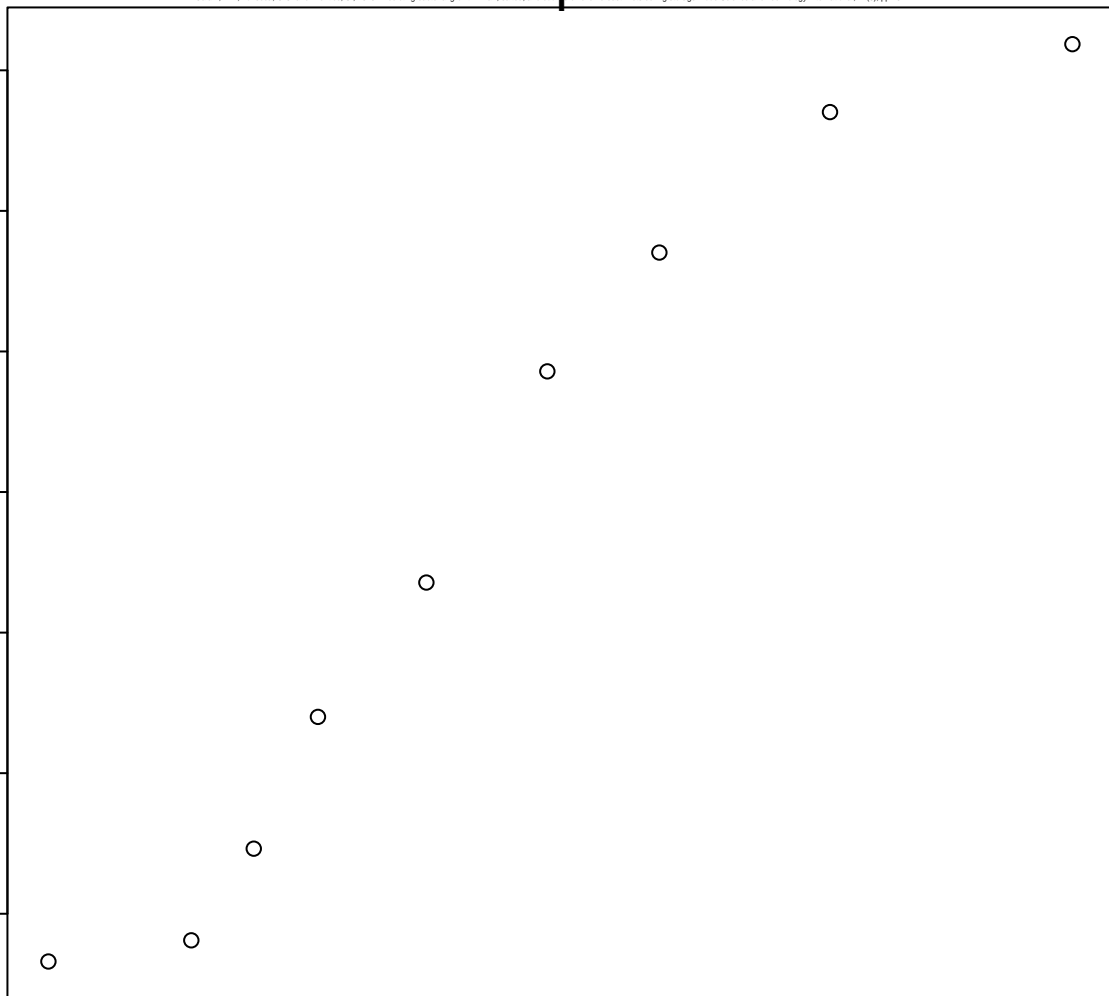
40

60

80

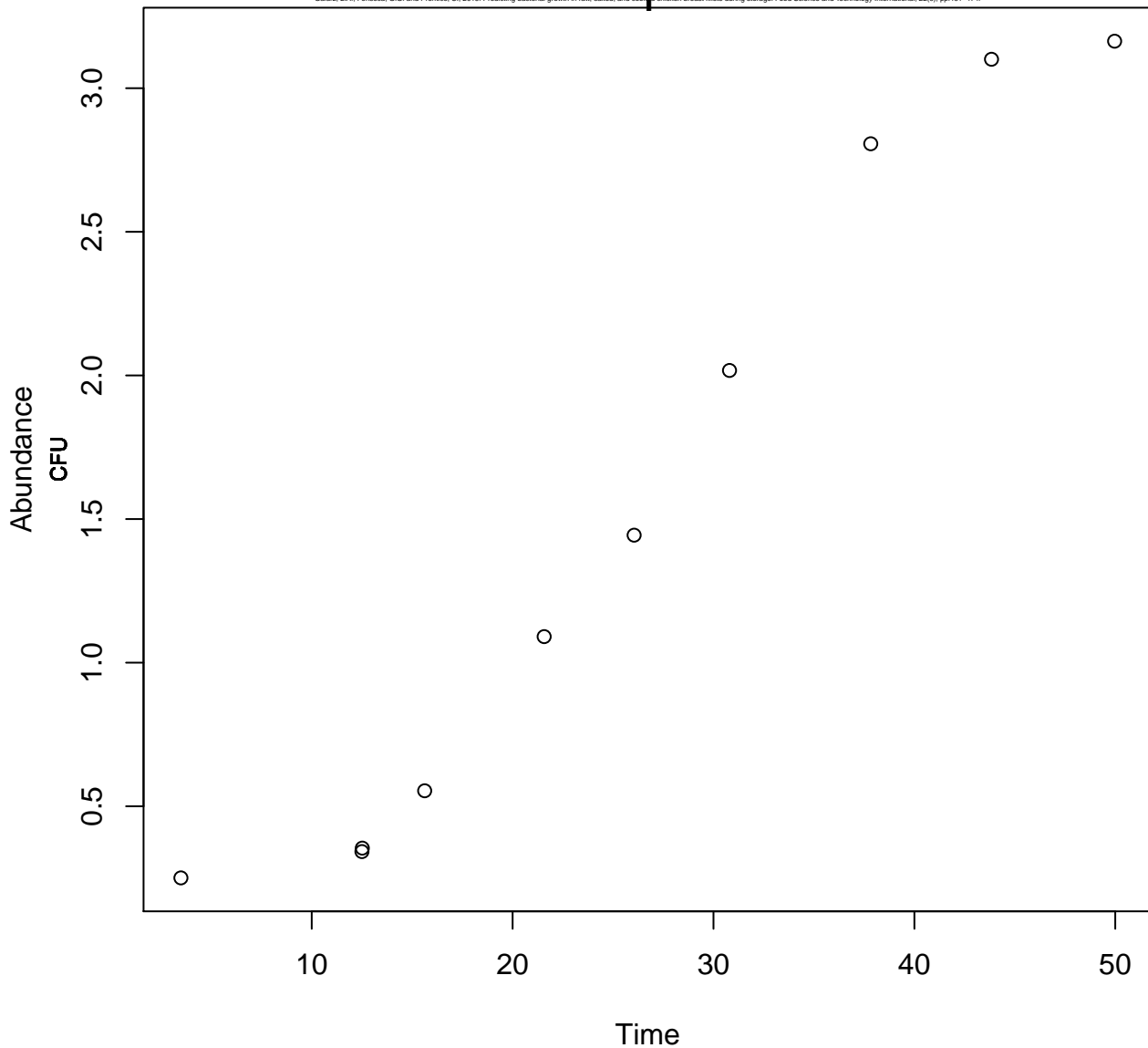
100

Time



**Aerobic Mesophilic.**  
**Cooked Chicken Breast**  
**20**

Galarz, L.A., Fonseca, G.G. and Prentice, C., 2016. Predicting bacterial growth in raw, salted, and cooked chicken breast filets during storage. Food Science and Technology International, 22(6), pp.461-474.



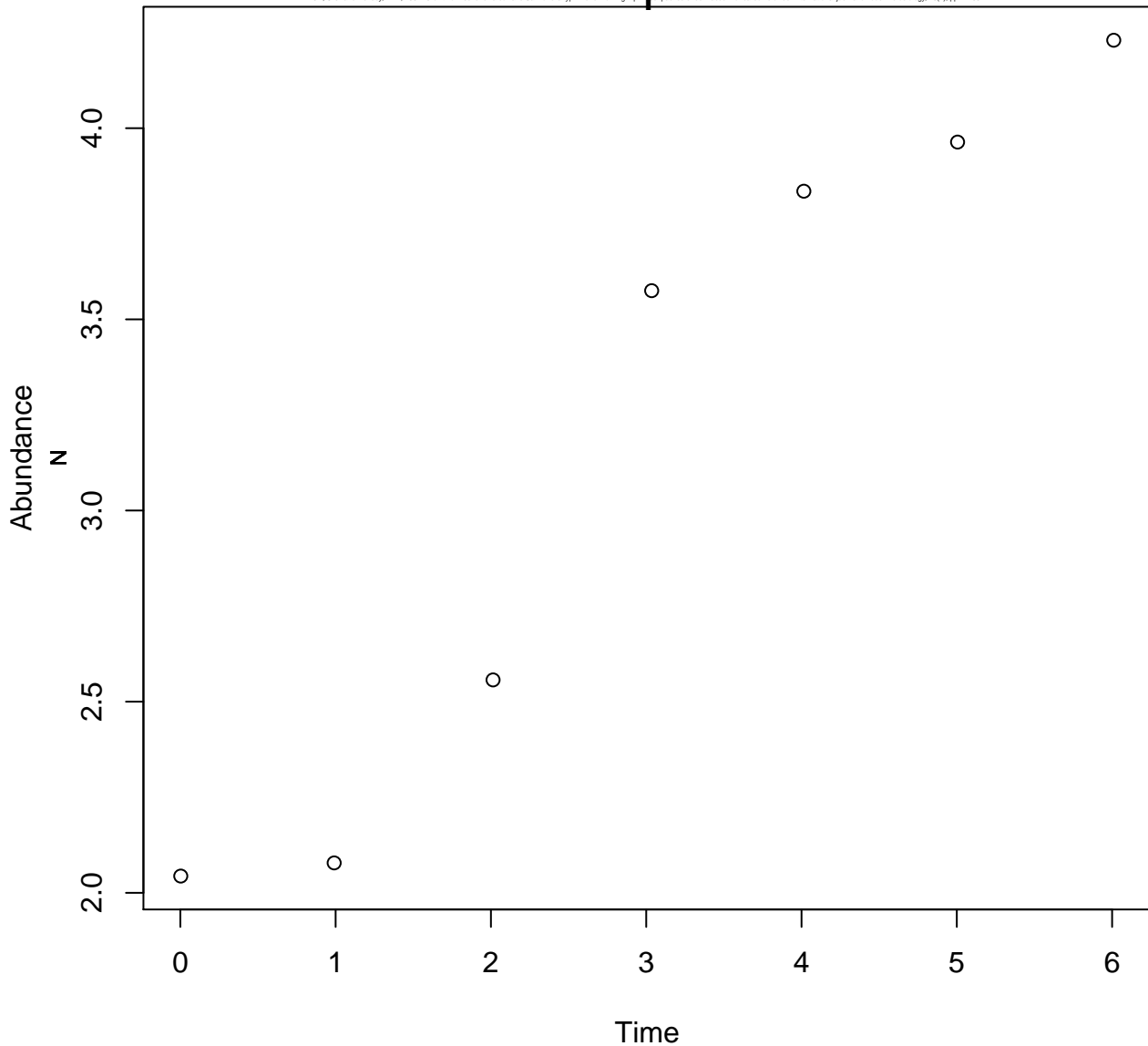
# Spoilage

## Vacuum Beef Striploins

8

1

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

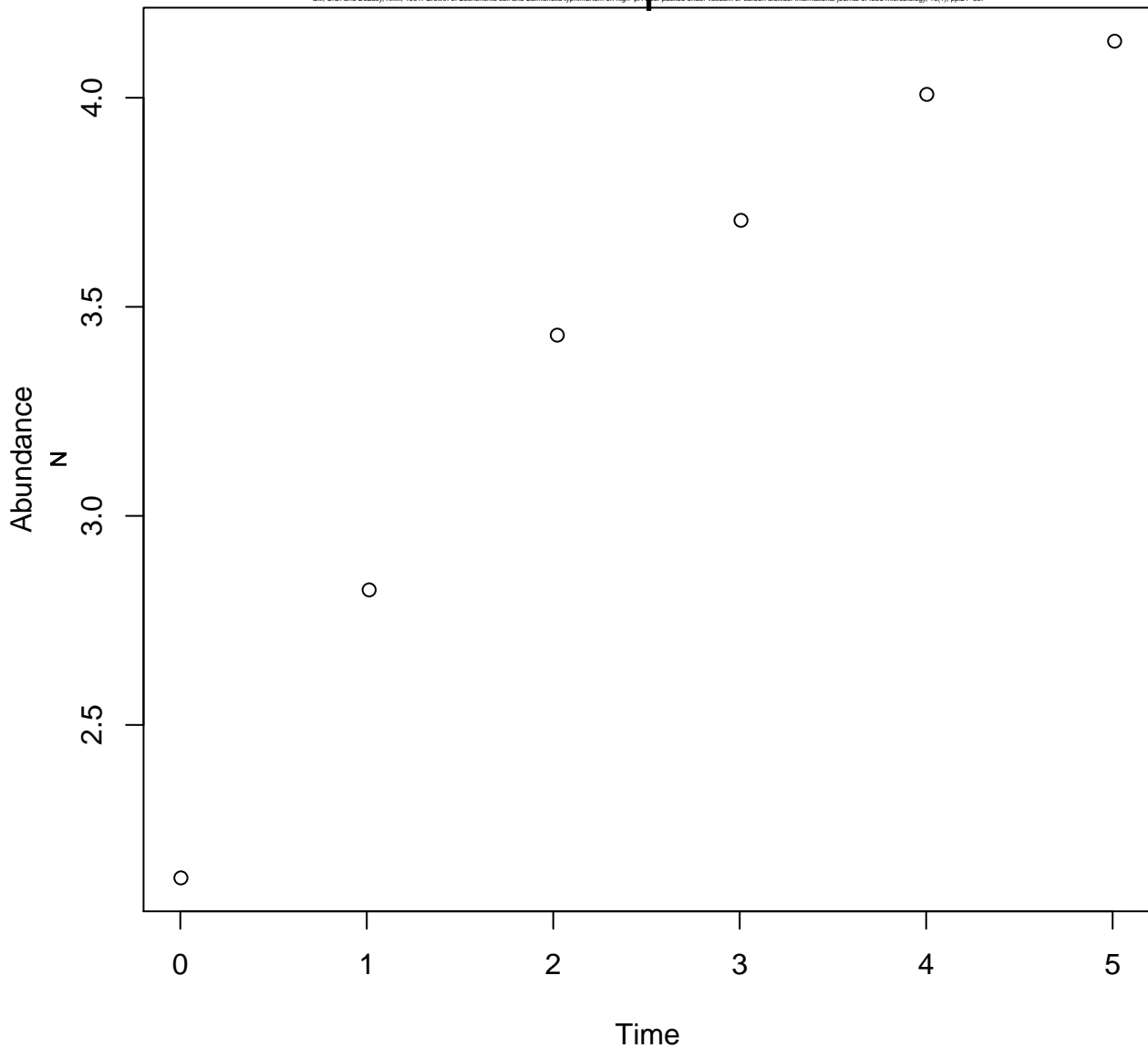


# Spoilage

## Vacuum Beef Striploins

### 10

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

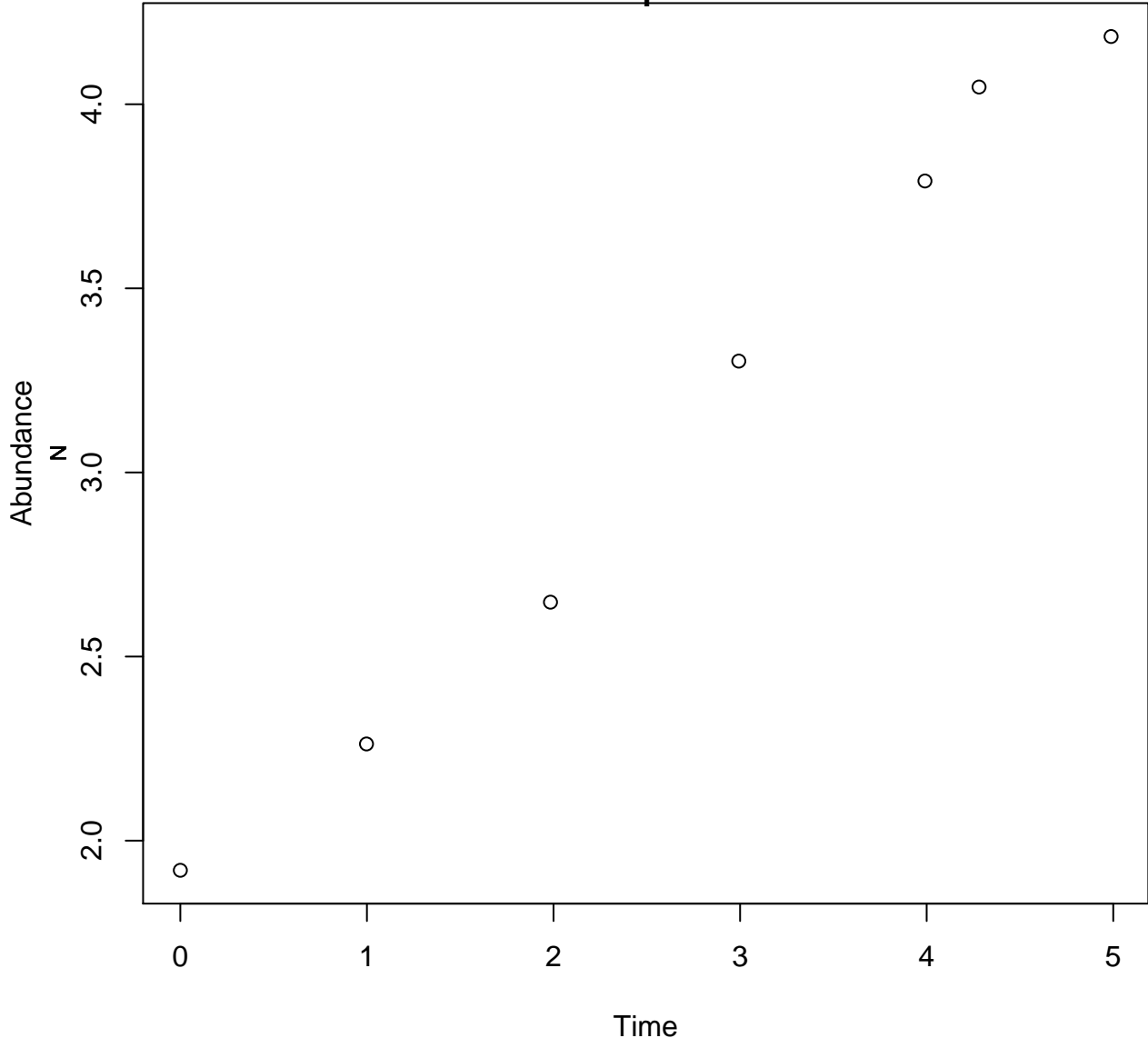


# Spoilage

## Vacuum Beef Striploins

### 12

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



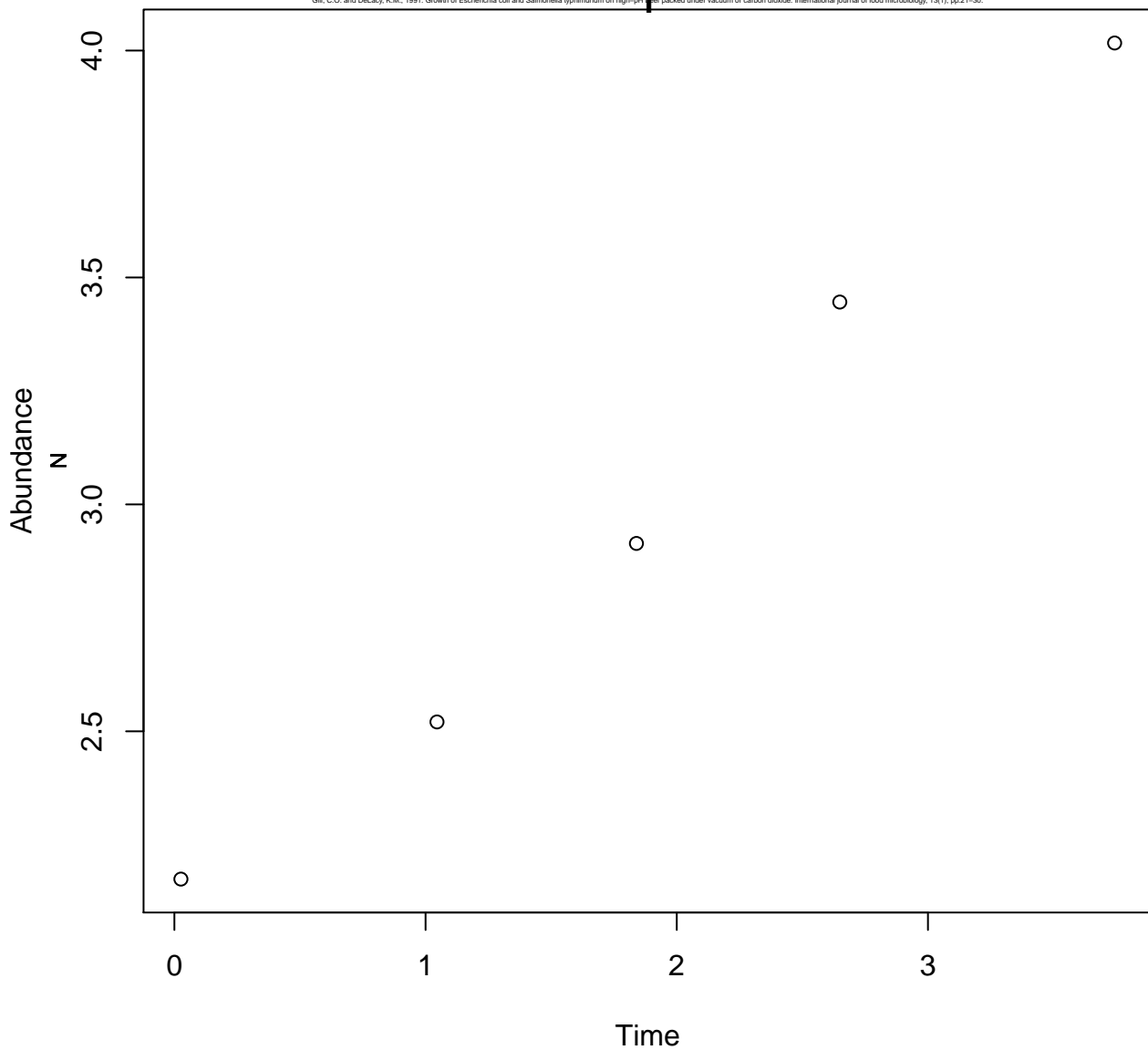


# Spoilage

## Vacuum Beef Striploins

15

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

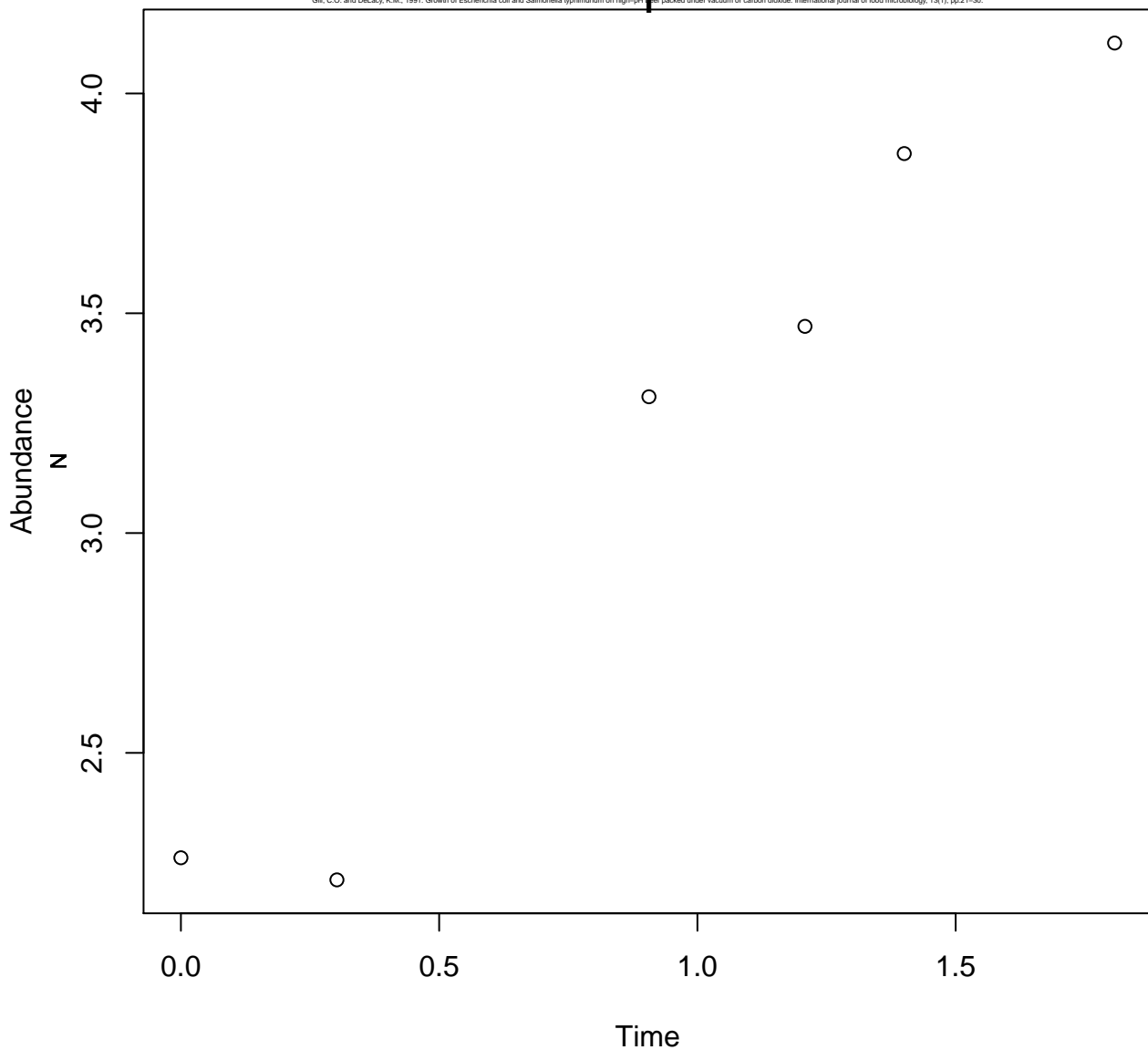


# Spoilage

## Vacuum Beef Striploins

20

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

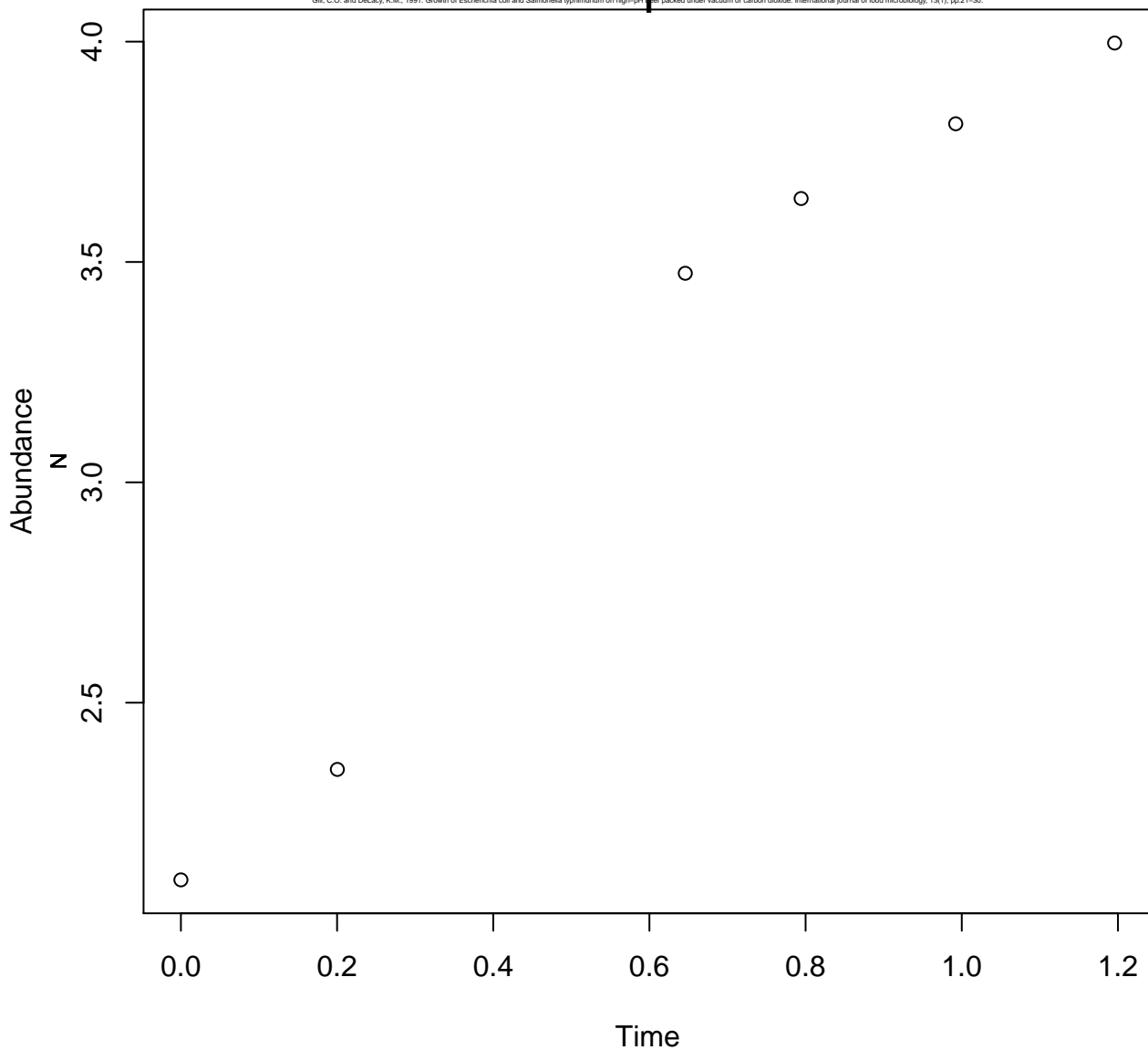


# Spoilage

## Vacuum Beef Striploins

30

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



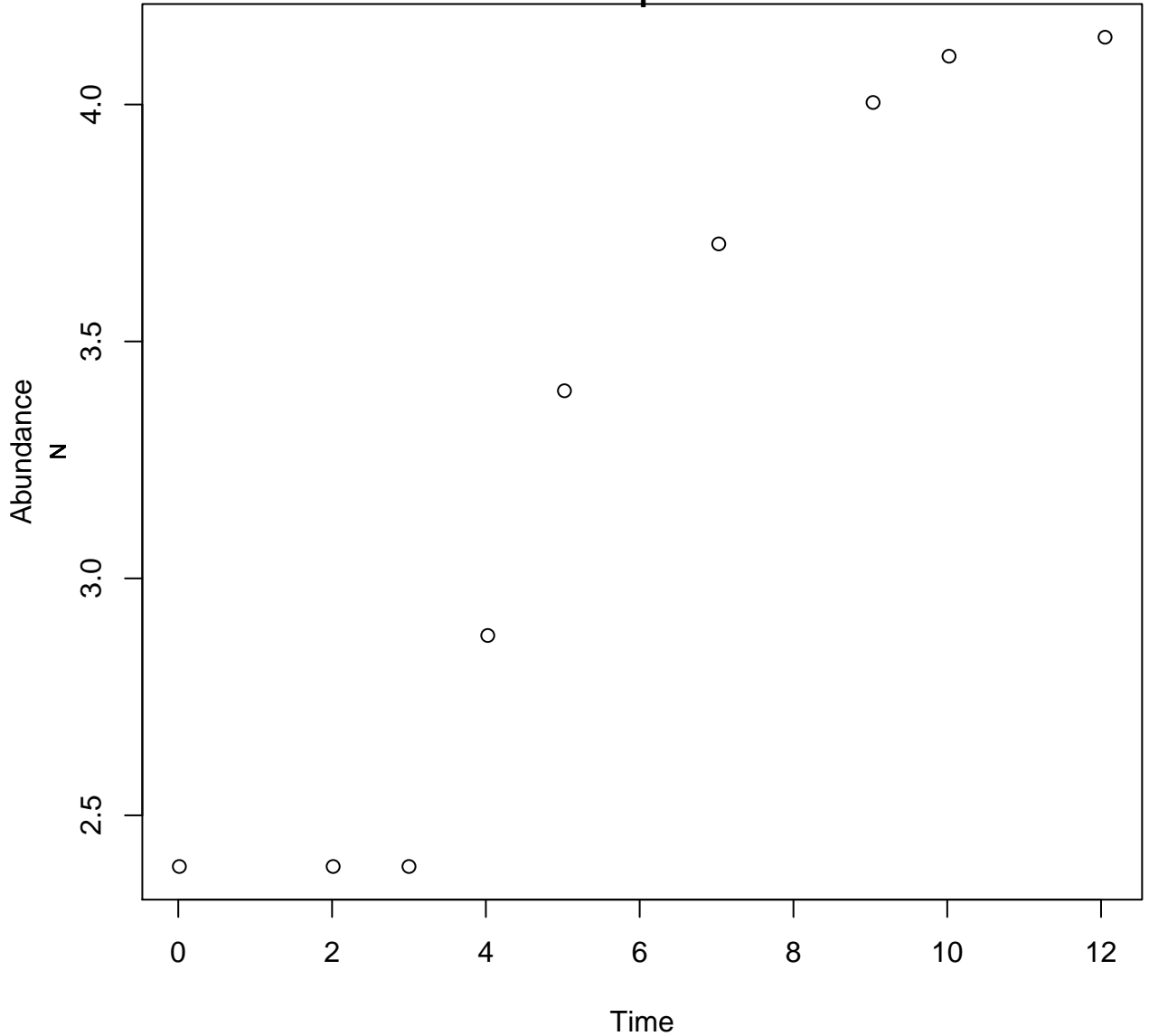
# Spoilage

## C02 Beef Striploins

10

1

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

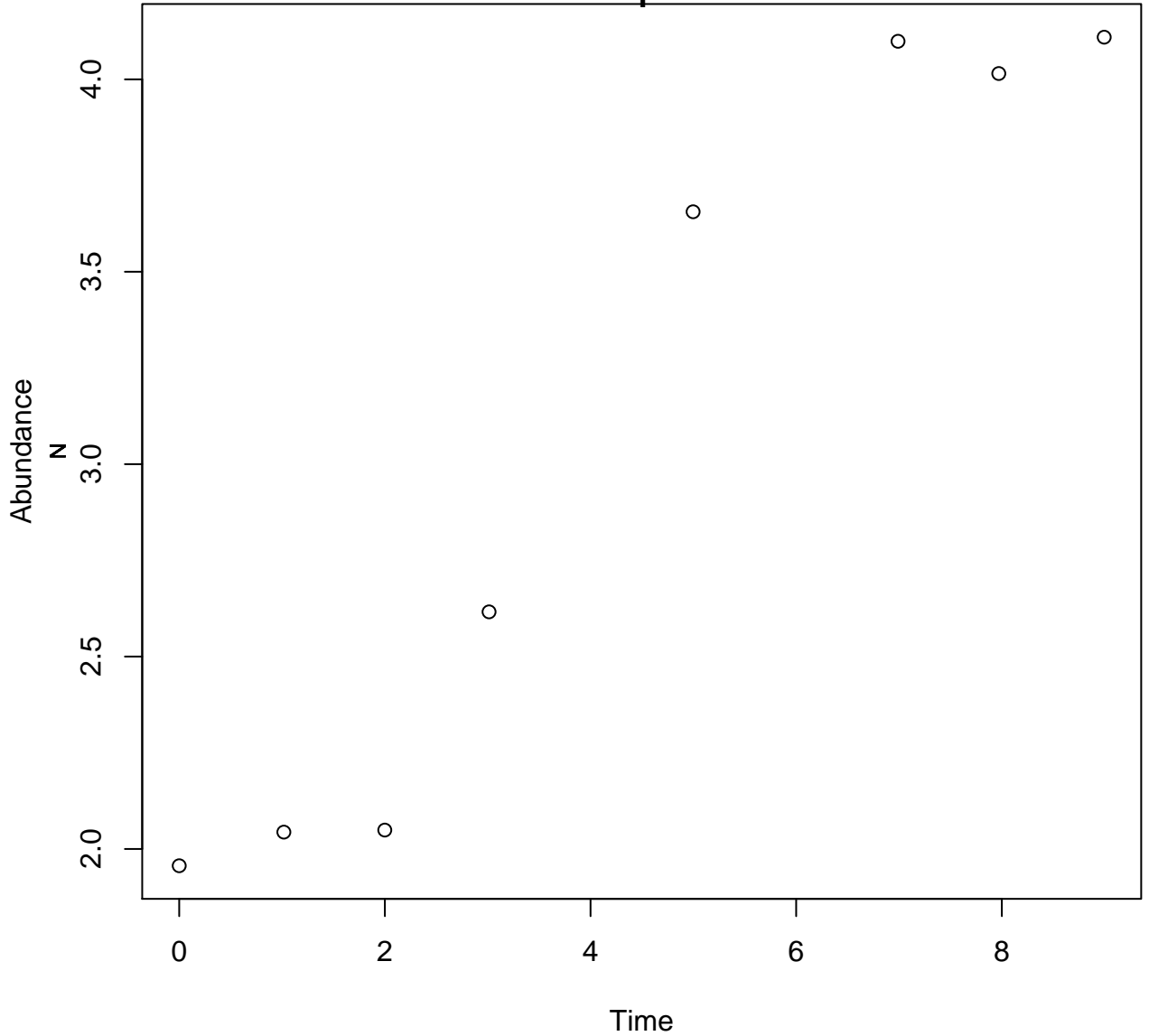


# Spoilage

## C02 Beef Striploins

### 12

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

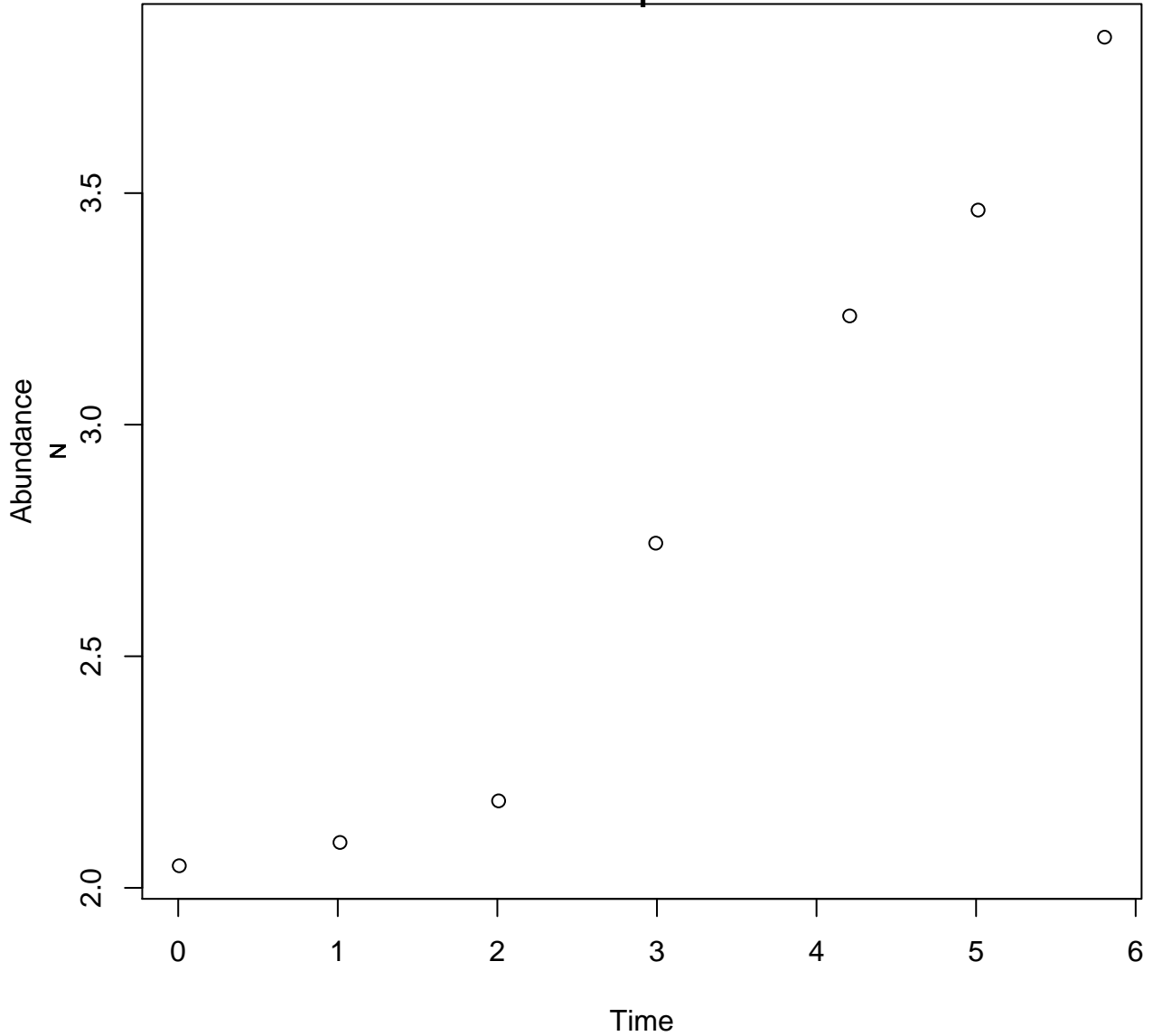


# Spoilage

## C02 Beef Striploins

### 15

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

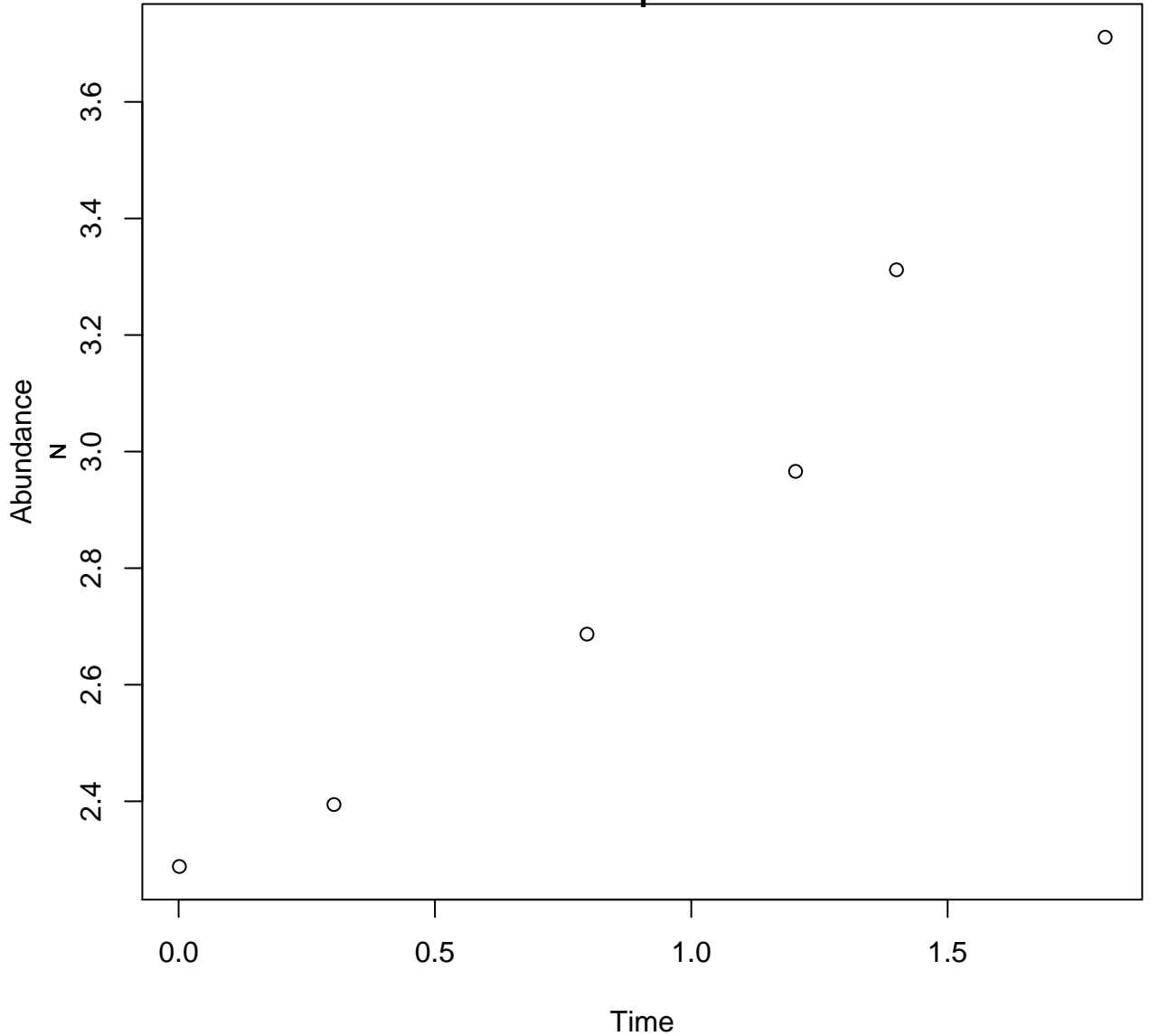


# Spoilage

## C02 Beef Striploins

### 20

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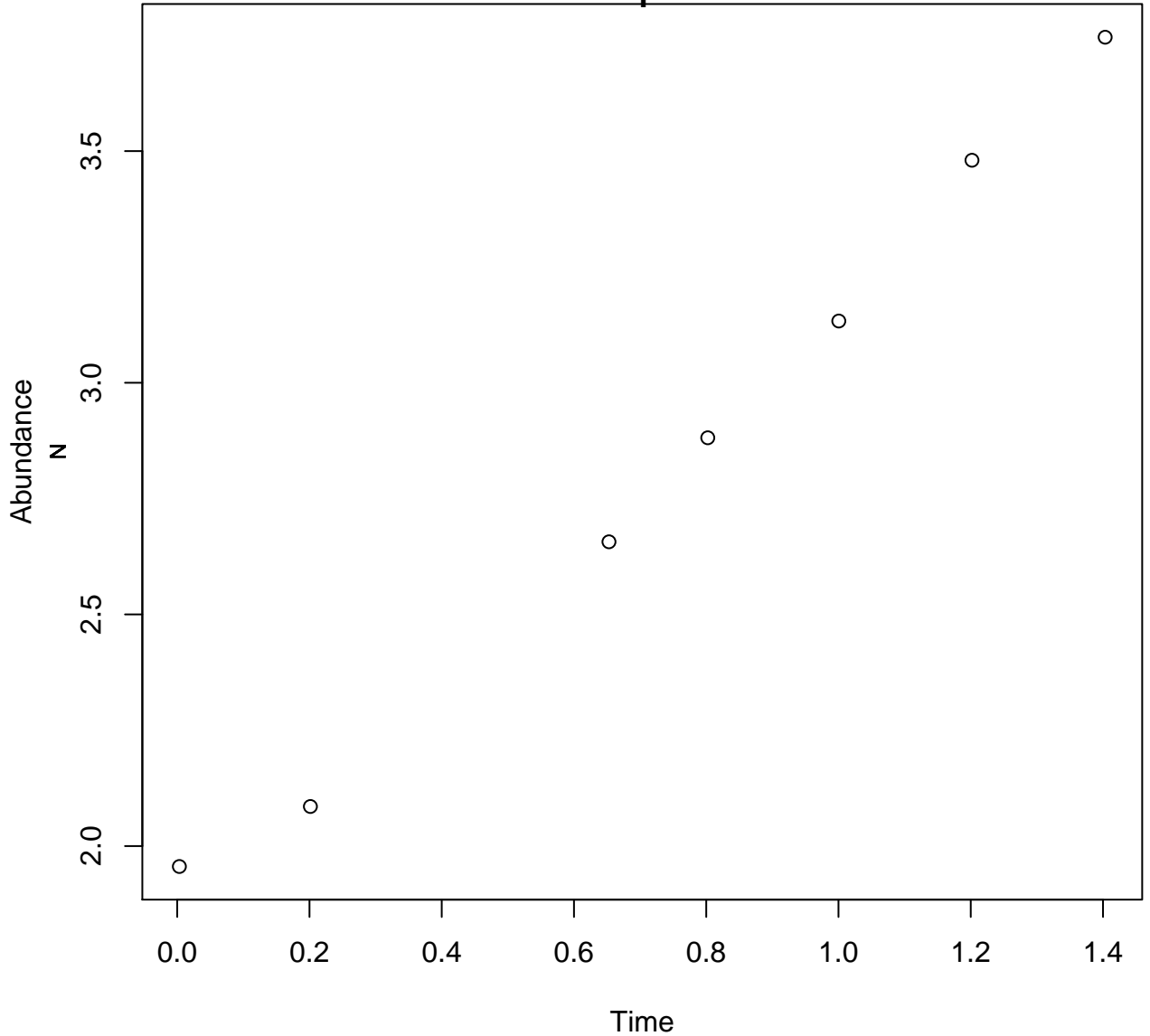


# Spoilage

## C02 Beef Striploins

### 30

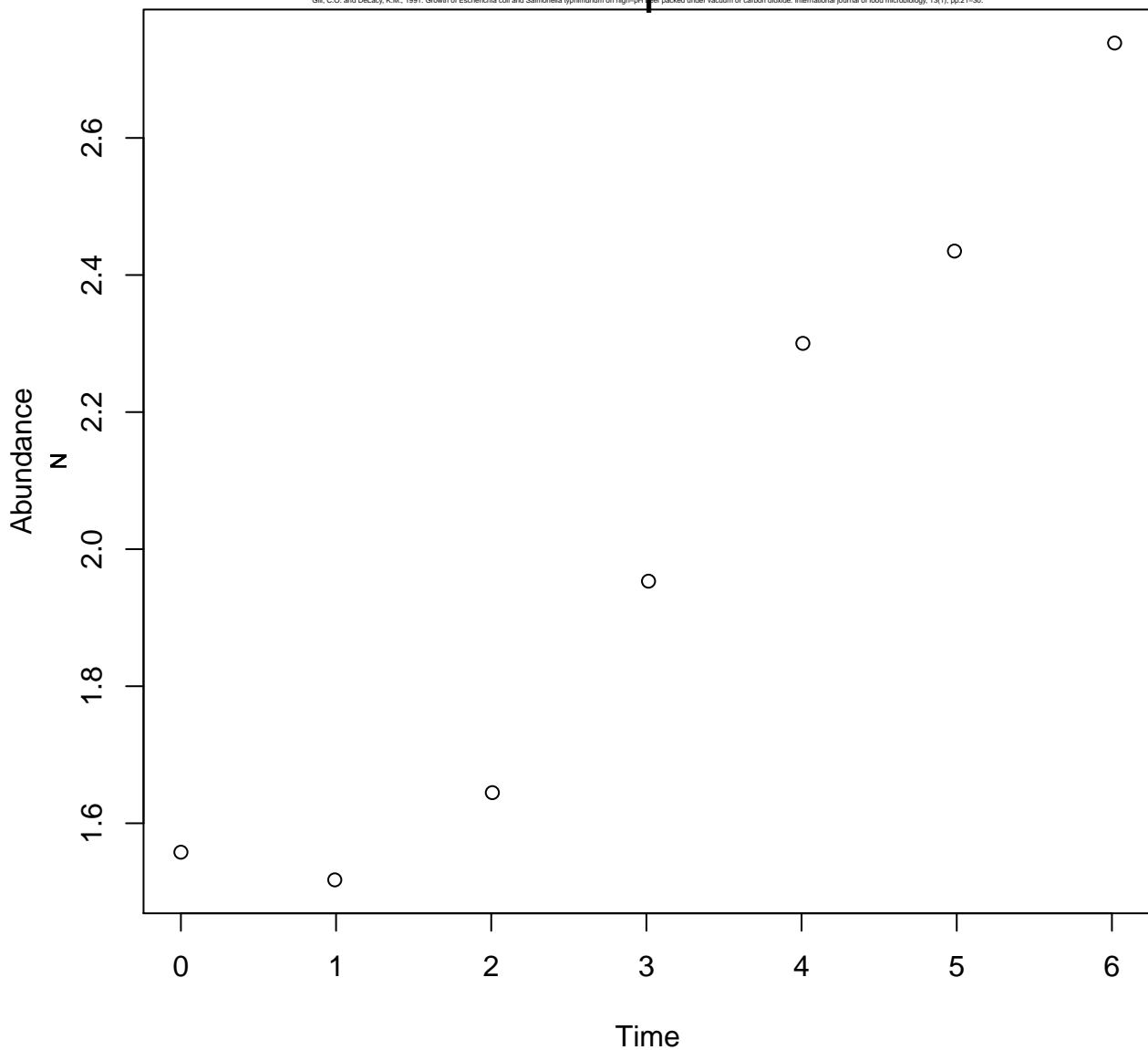
Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.





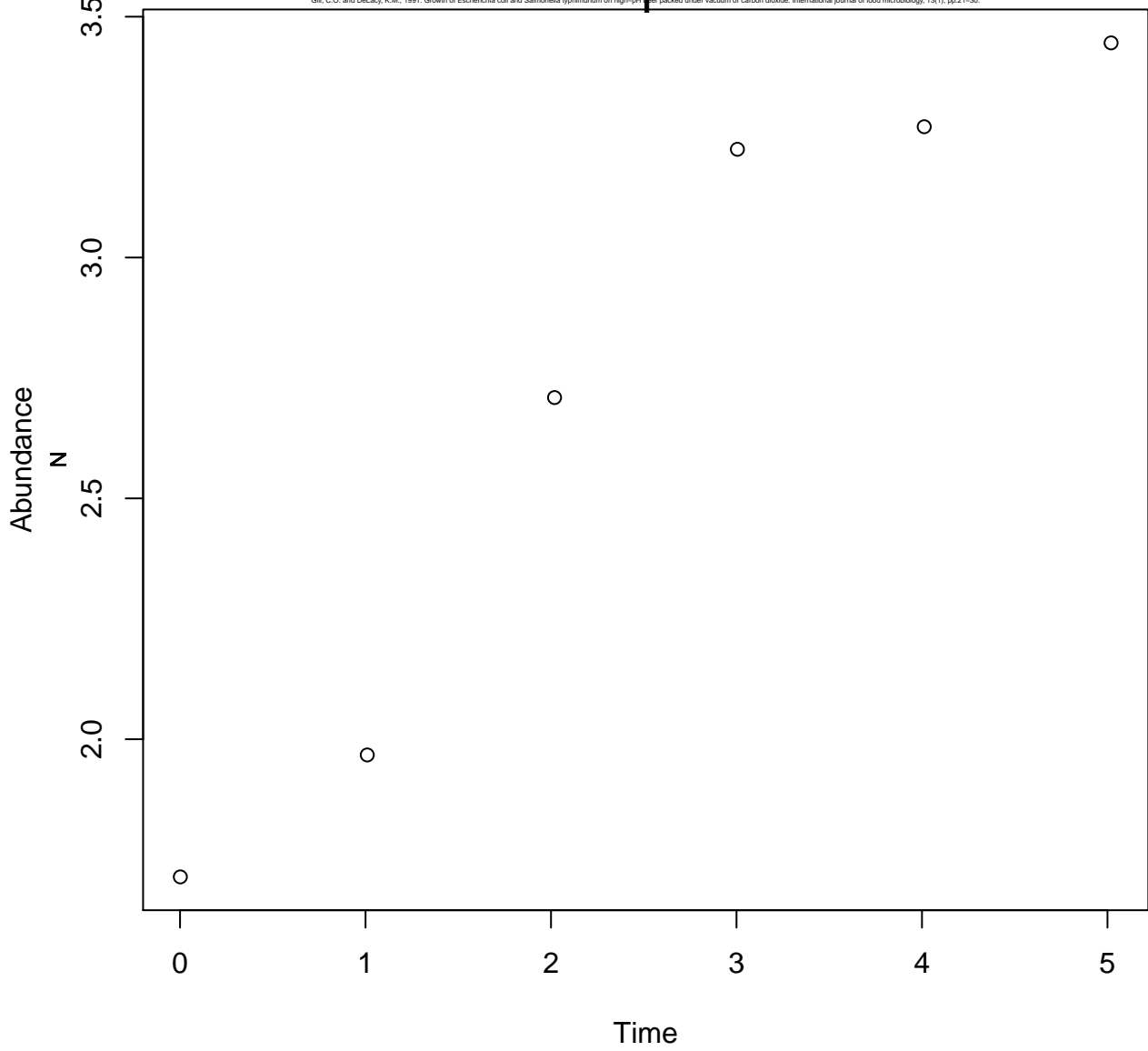
**Escherichia coli**  
**Vacuum Beef Striploins**  
**8**

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



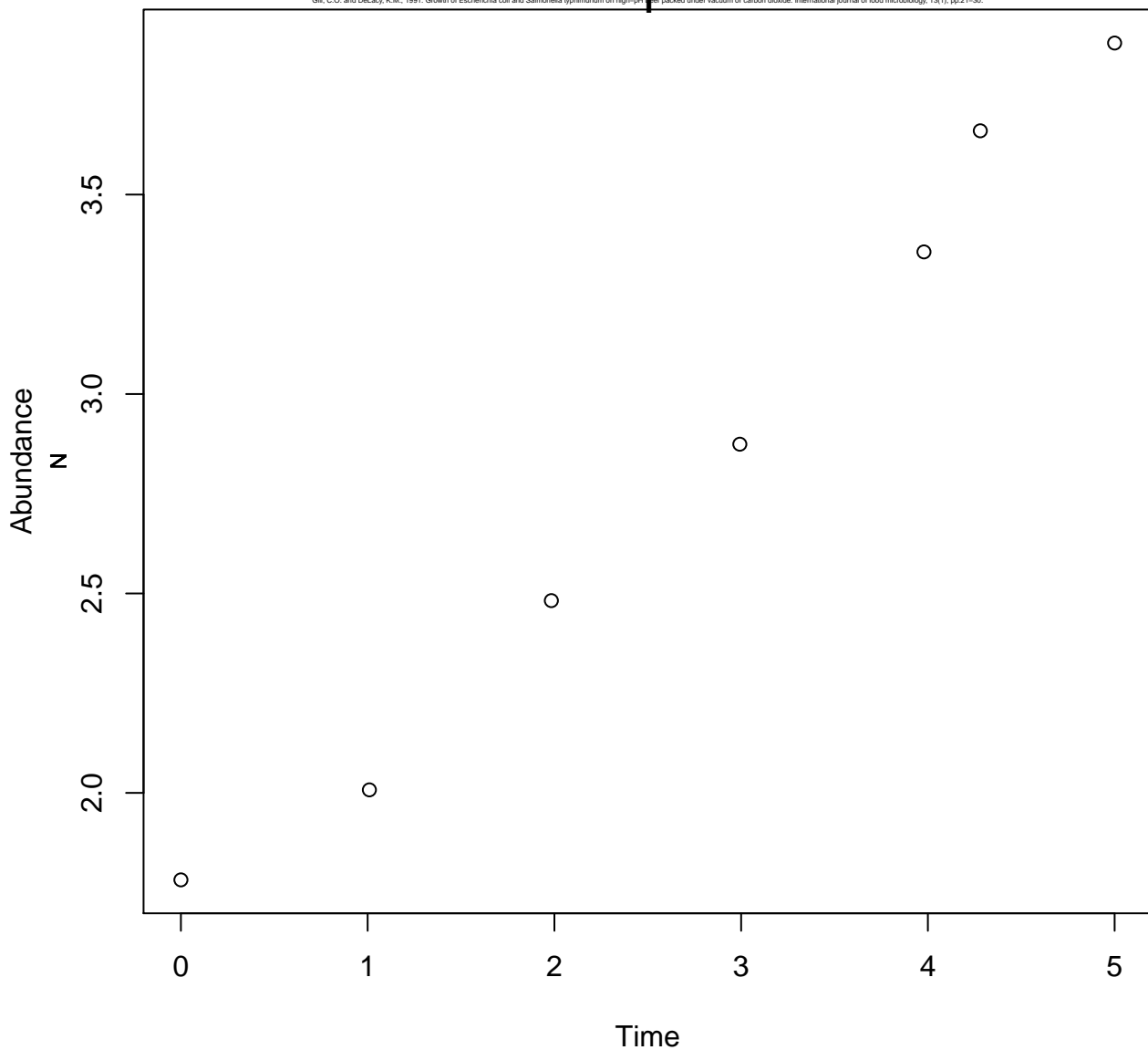
**Escherichia coli**  
**Vacuum Beef Striploins**  
**10**

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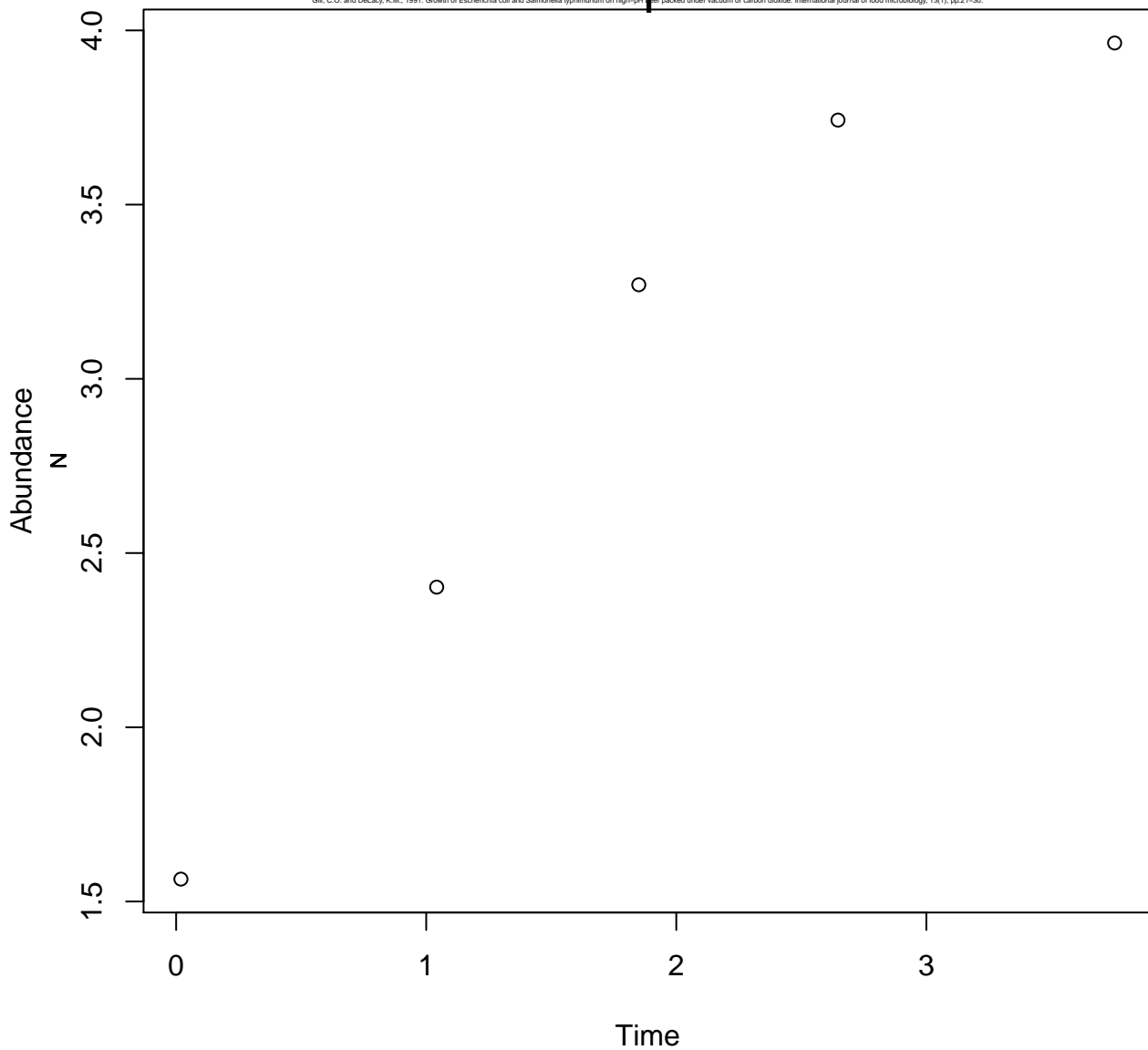
Escherichia coli  
Vacuum Beef Striploins  
12

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



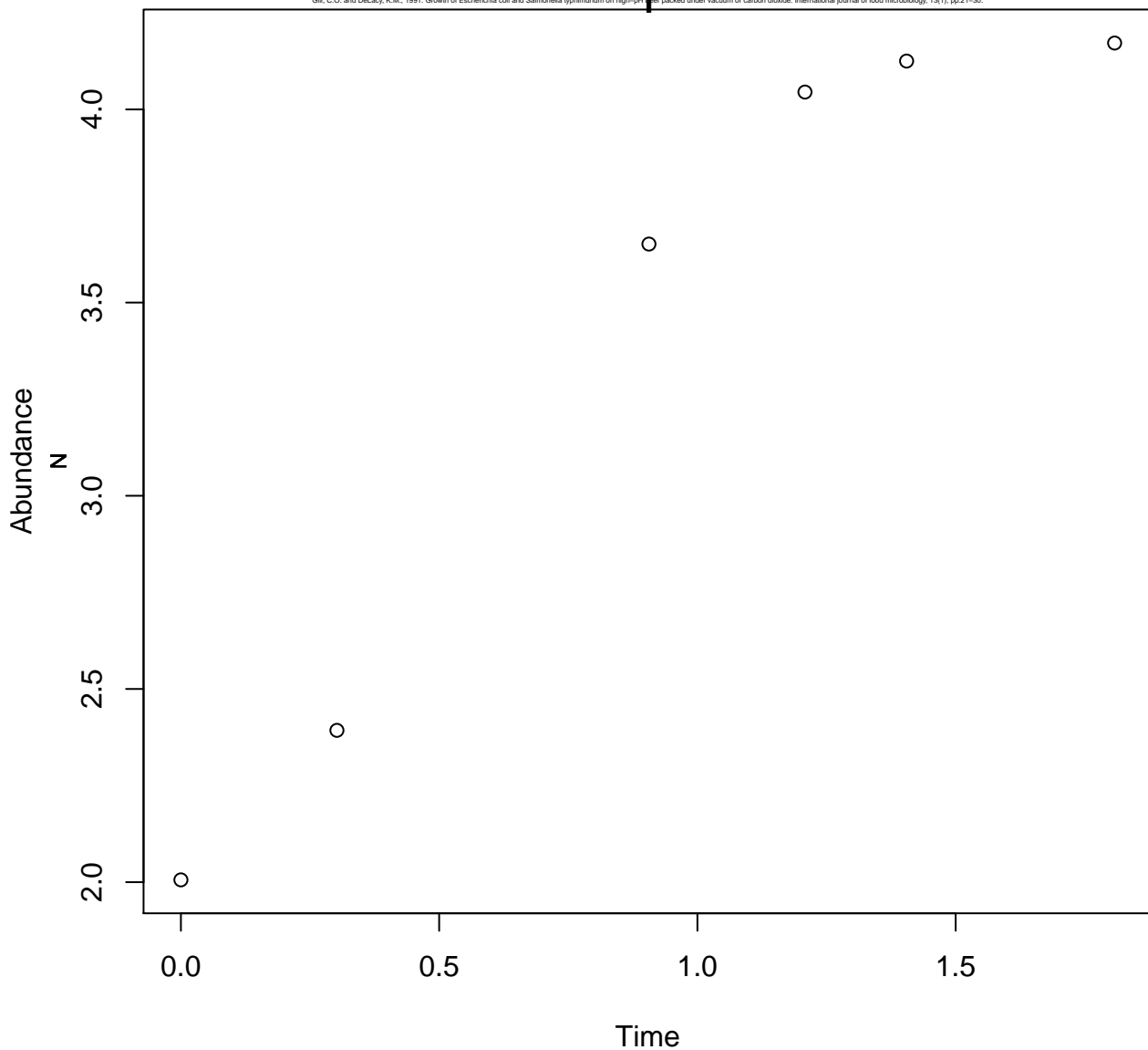
**Escherichia coli**  
**Vacuum Beef Striploins**  
**15**

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



**Escherichia coli**  
**Vacuum Beef Striploins**  
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Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

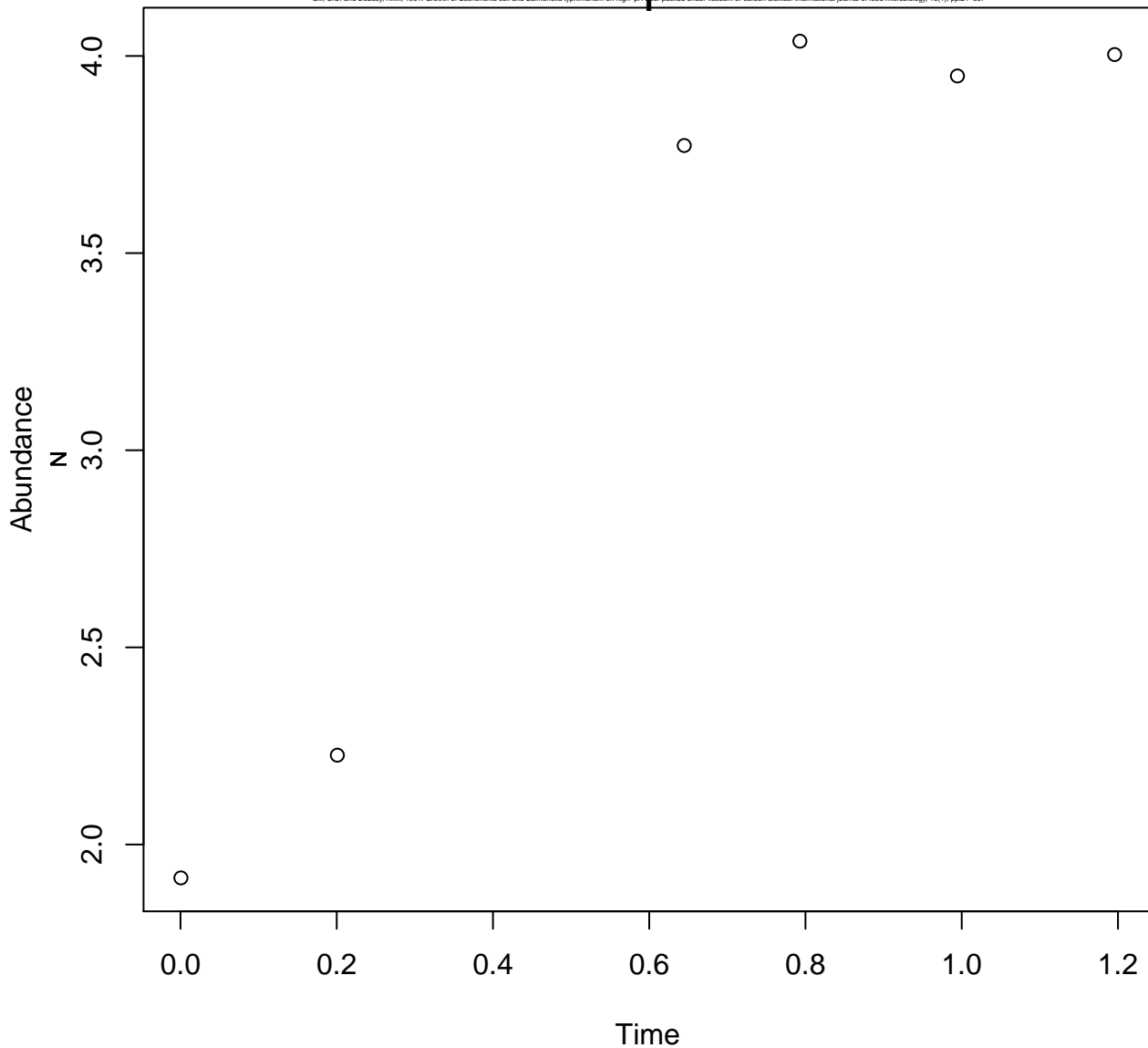


# Escherichia coli

## Vacuum Beef Striploins

### 30

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

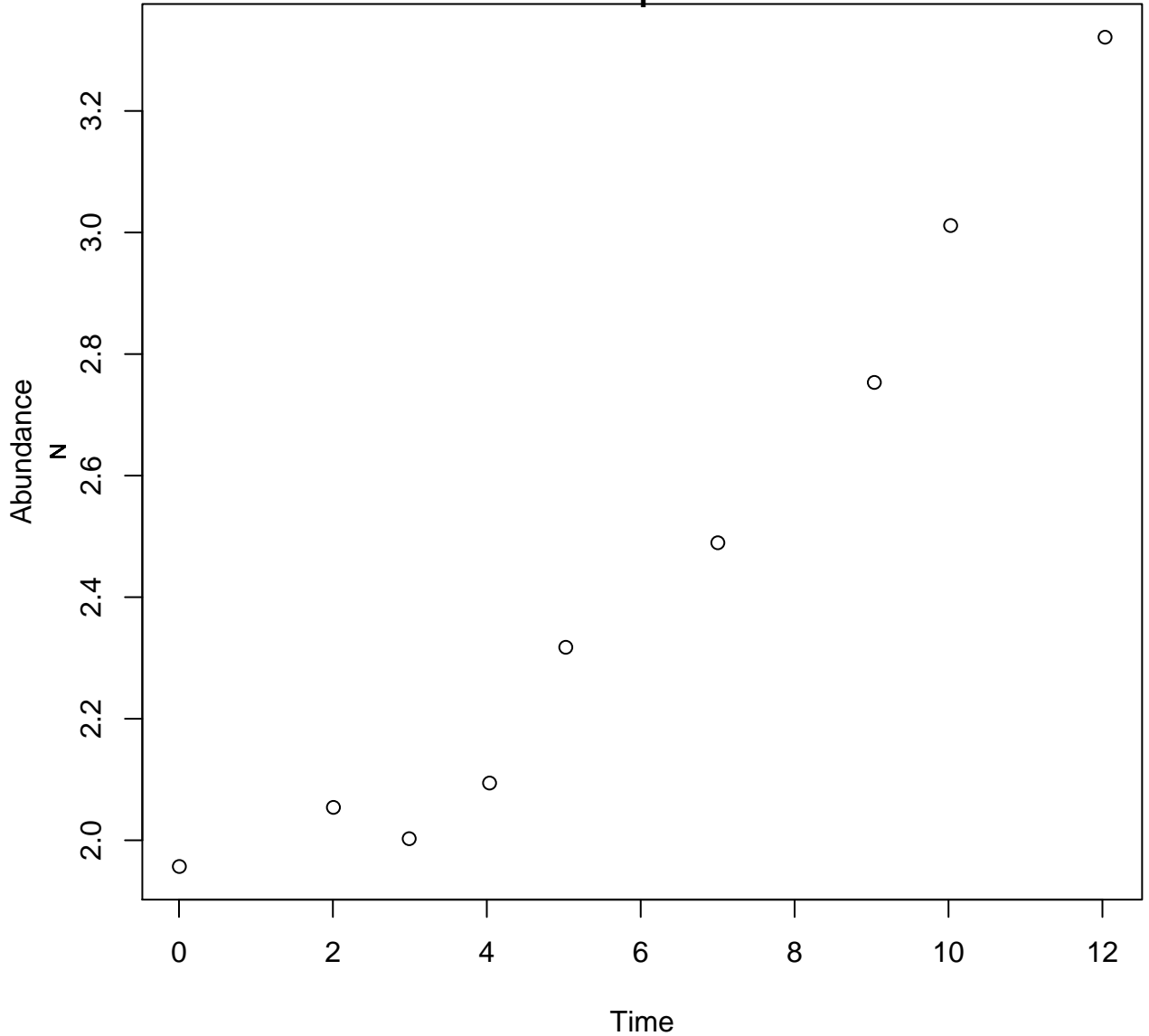


# Escherichia coli

## C02 Beef Striploins

### 10

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

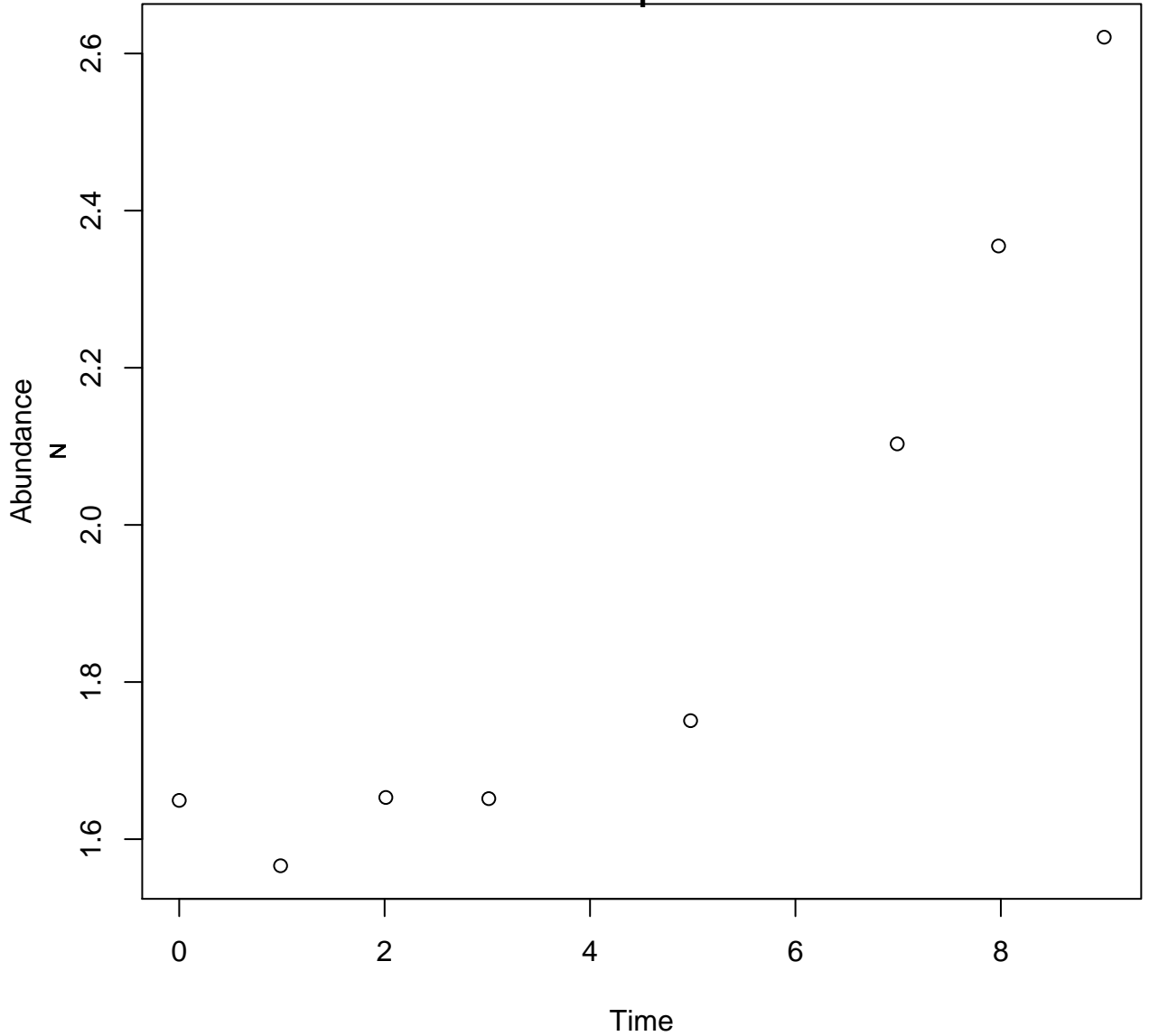


# Escherichia coli

## C02 Beef Striploins

### 12

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



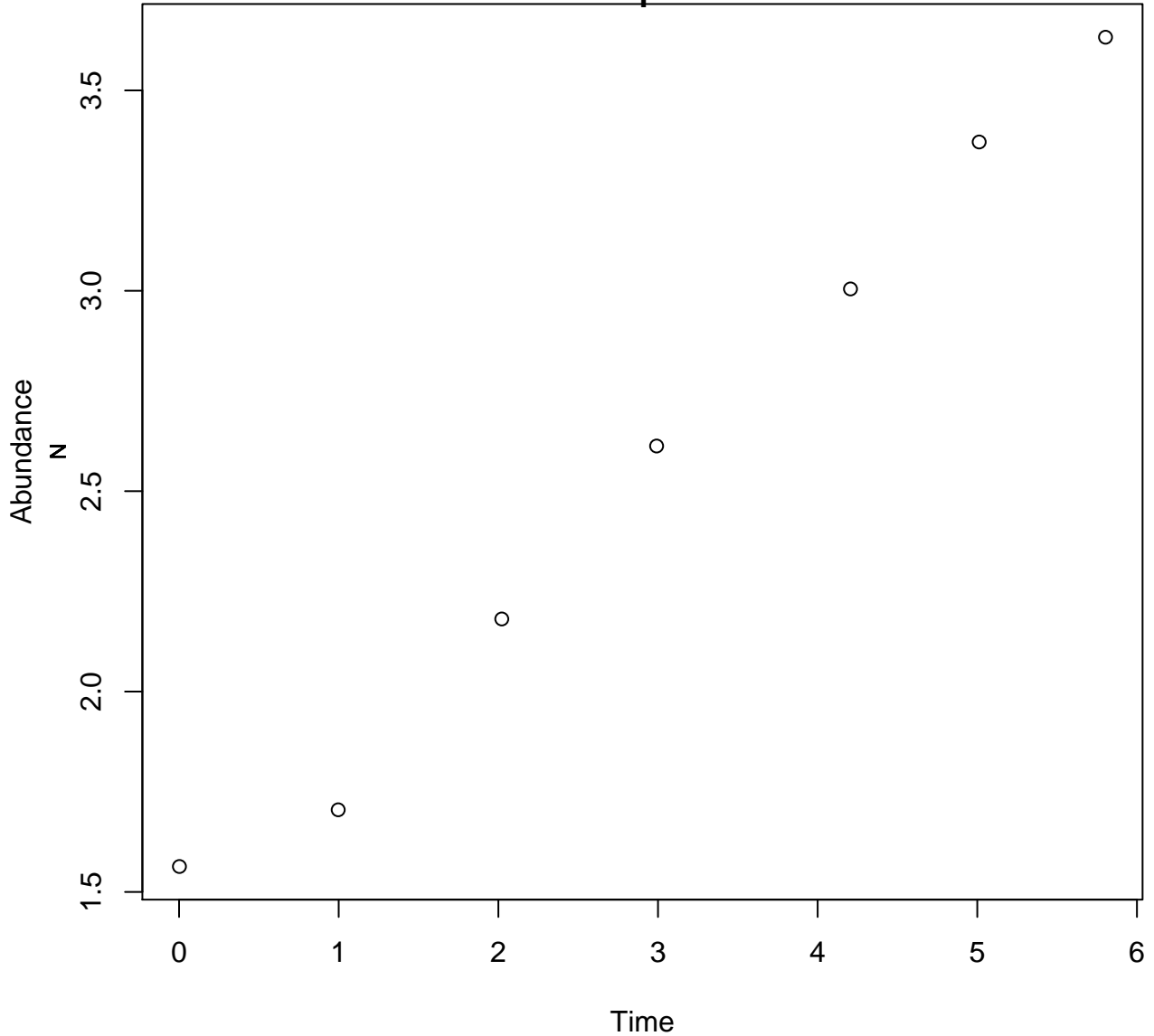


# Escherichia coli

## C02 Beef Striploins

### 15

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

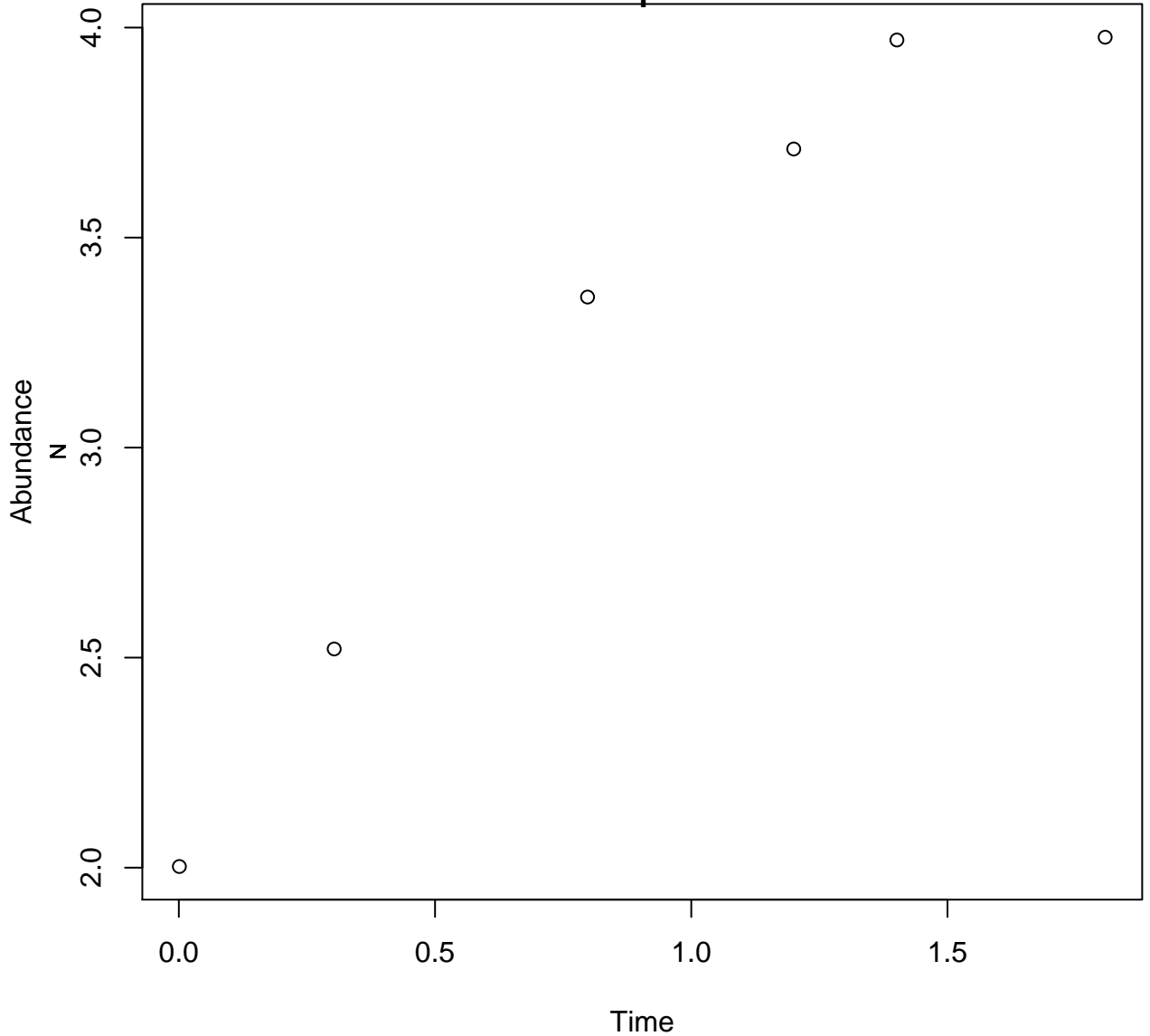


# Escherichia coli

## C02 Beef Striploins

### 20

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

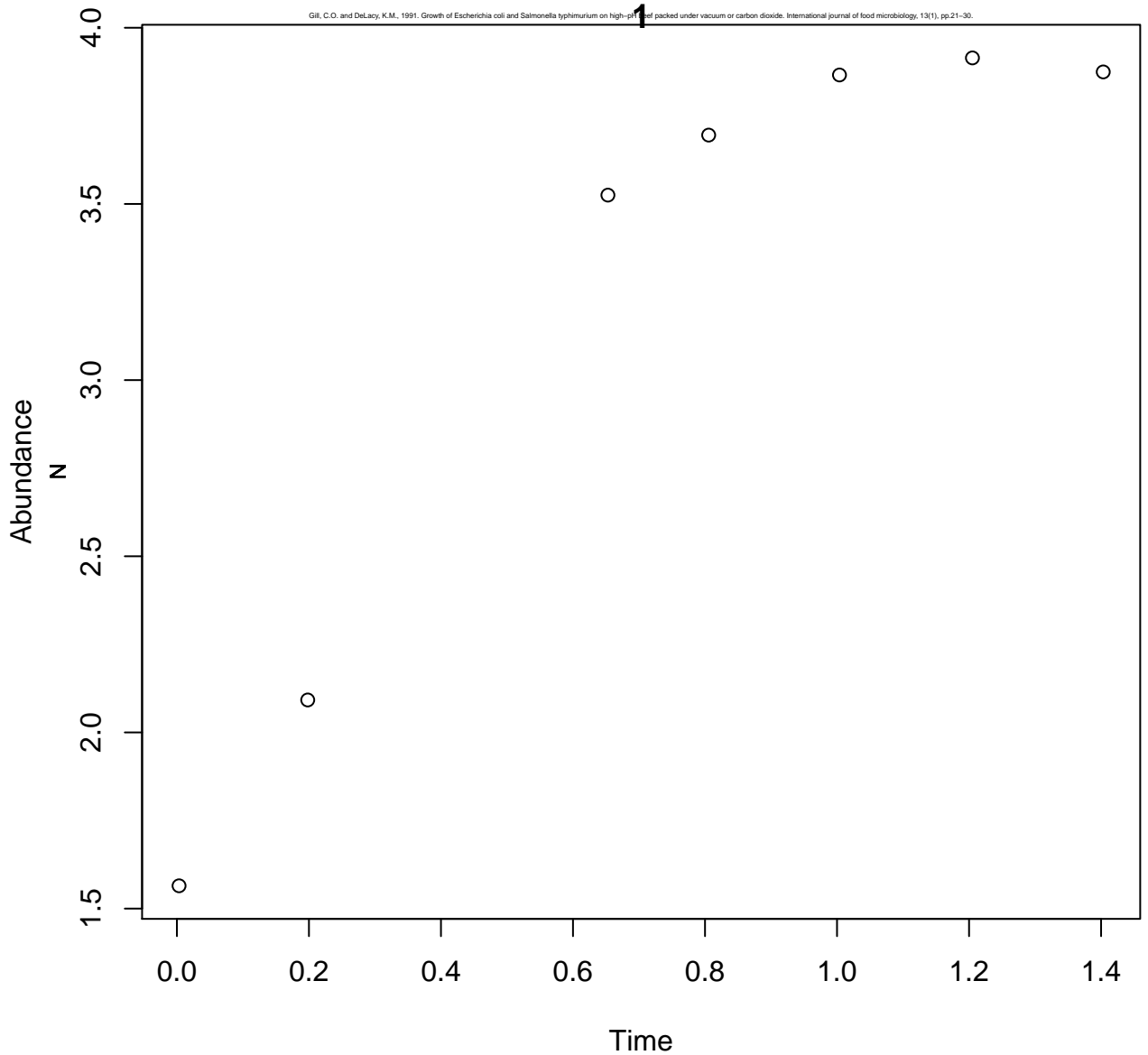


# Escherichia coli

## C02 Beef Striploins

### 30

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



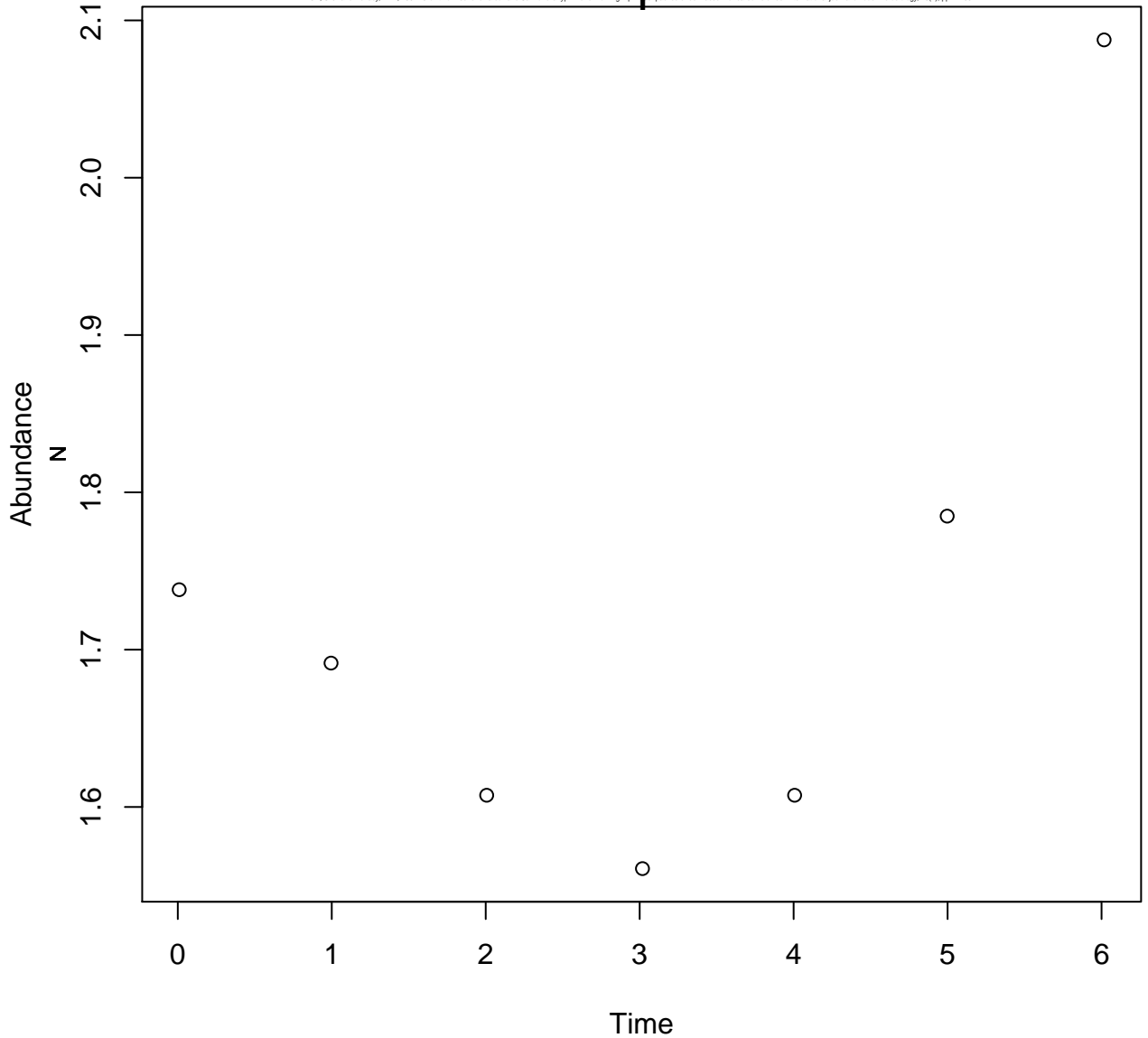
# Salmonella Typhimurium

## Vacuum Beef Striploins

8

1

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

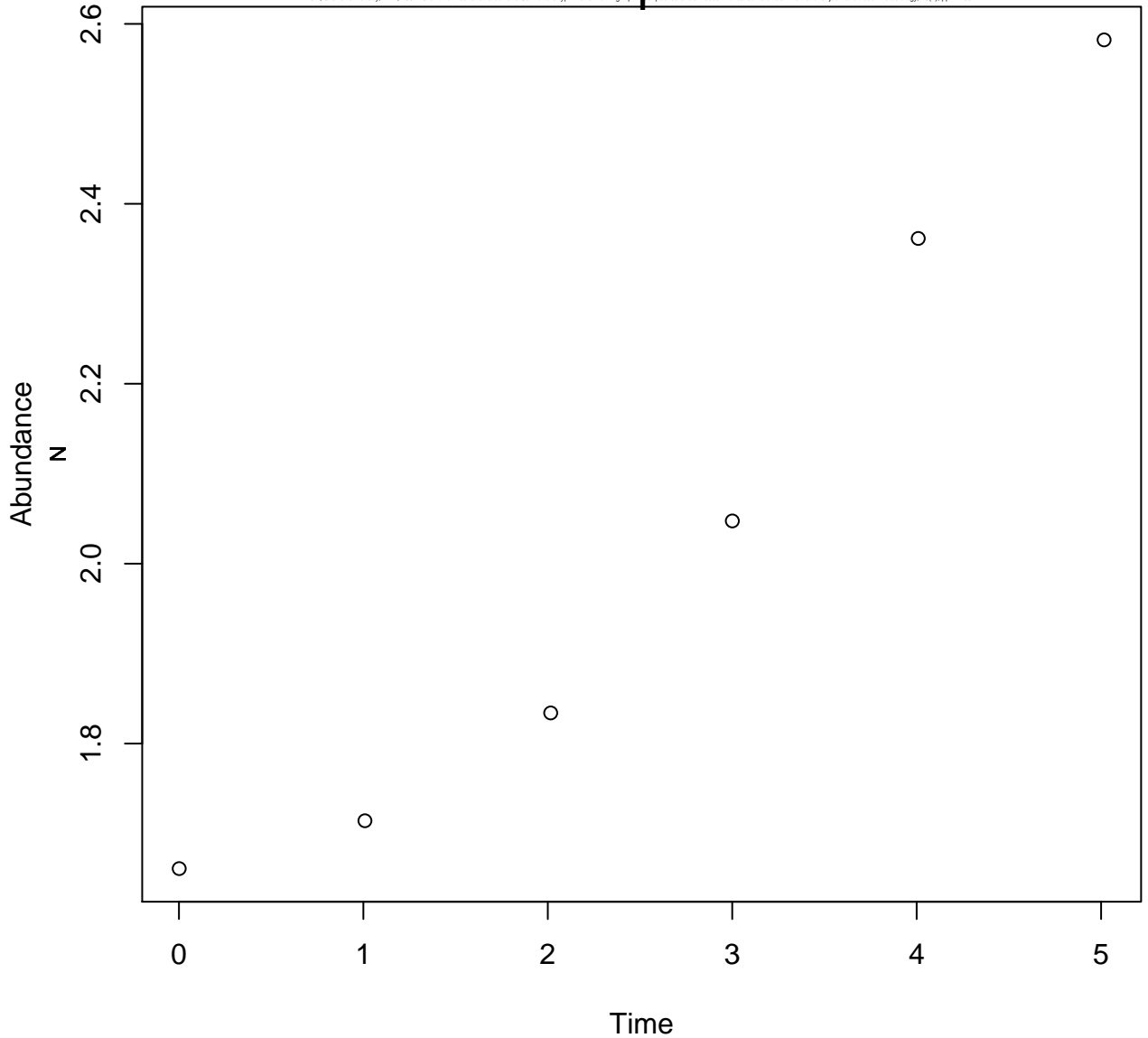


# Salmonella Typhimurium

## Vacuum Beef Striploins

### 10

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

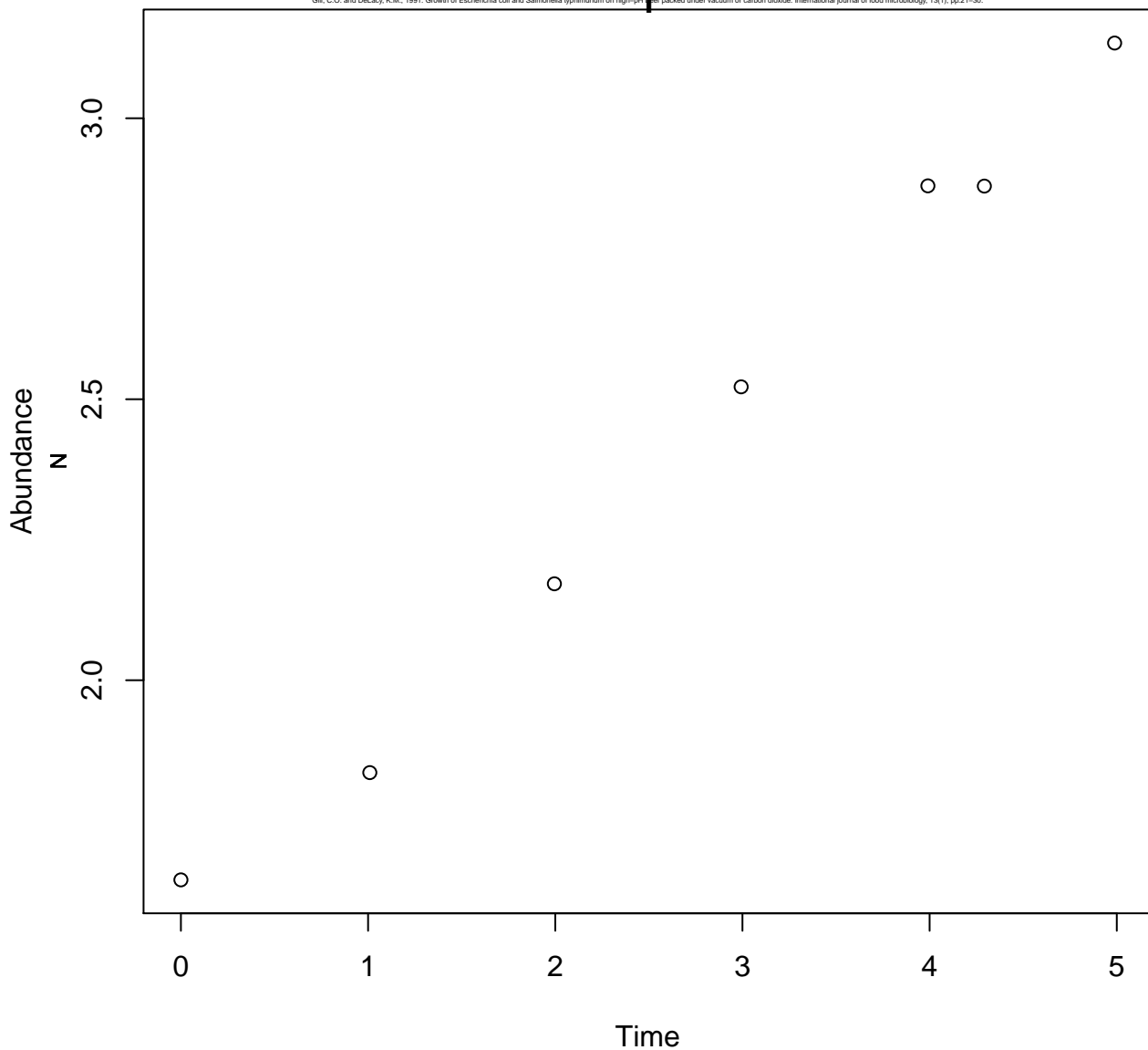


# Salmonella Typhimurium

## Vacuum Beef Striploins

12

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

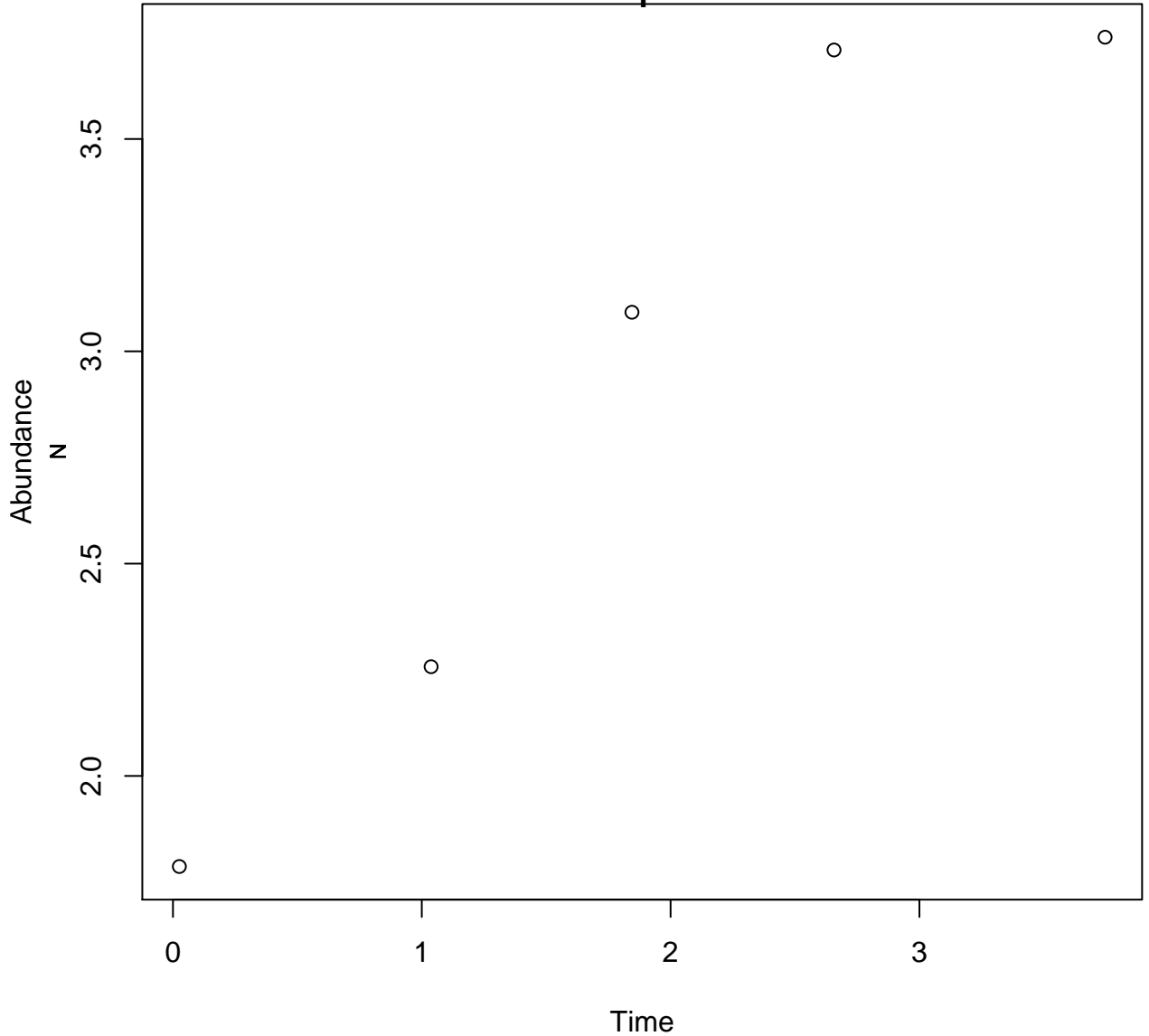


# Salmonella Typhimurium

## Vacuum Beef Striploins

### 15

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

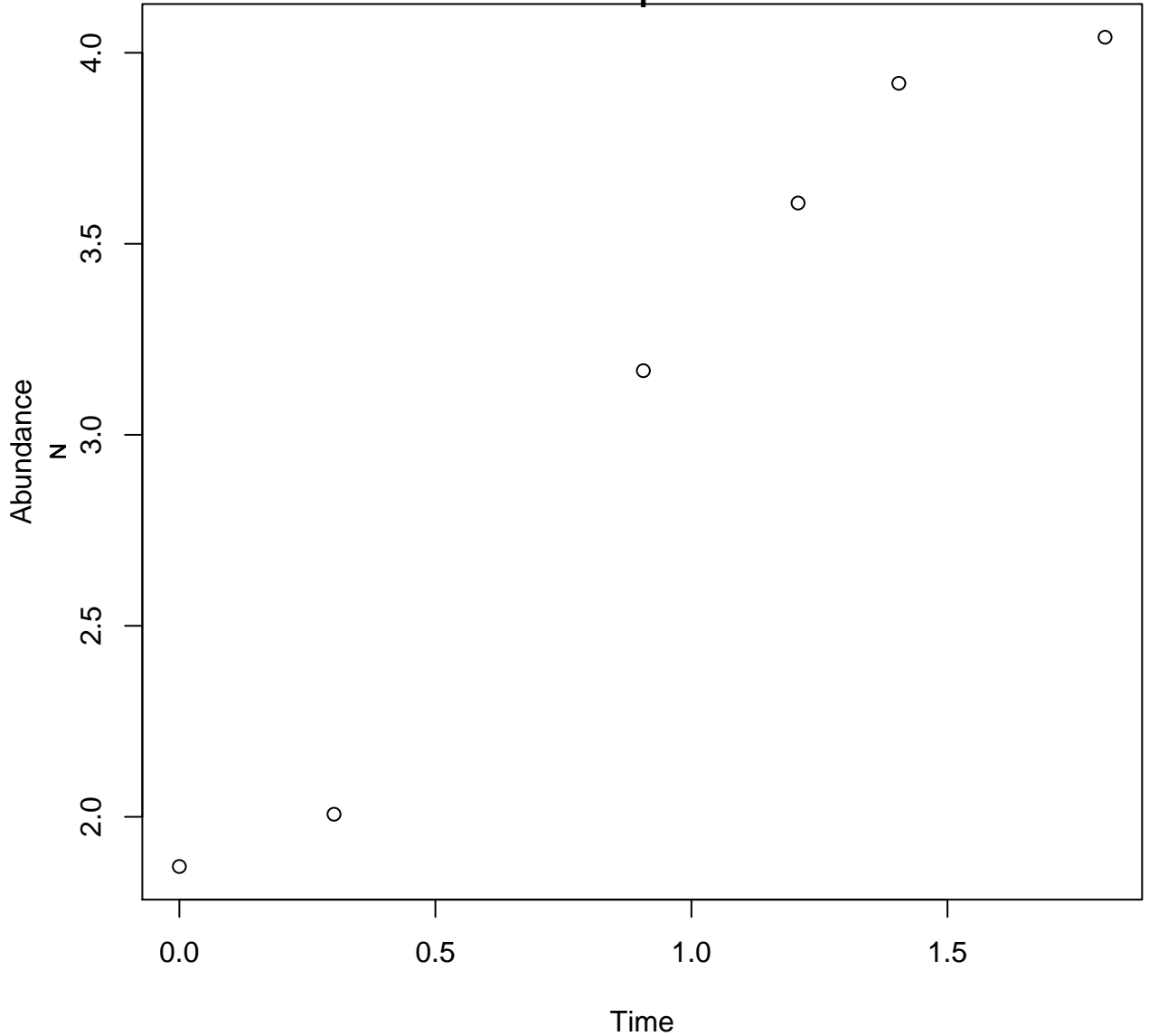


# Salmonella Typhimurium

## Vacuum Beef Striploins

### 20

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.



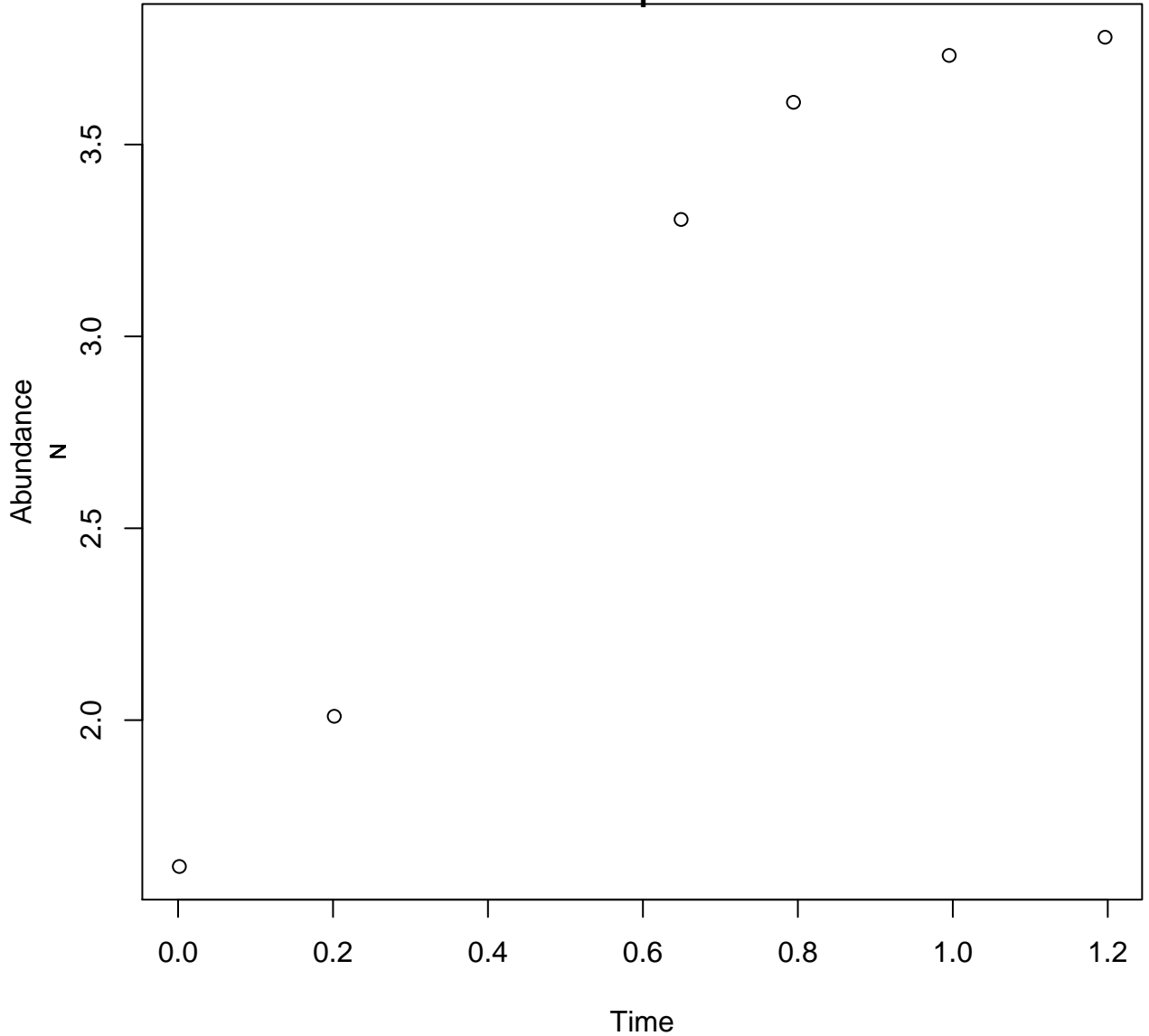


# Salmonella Typhimurium

## Vacuum Beef Striploins

### 30

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

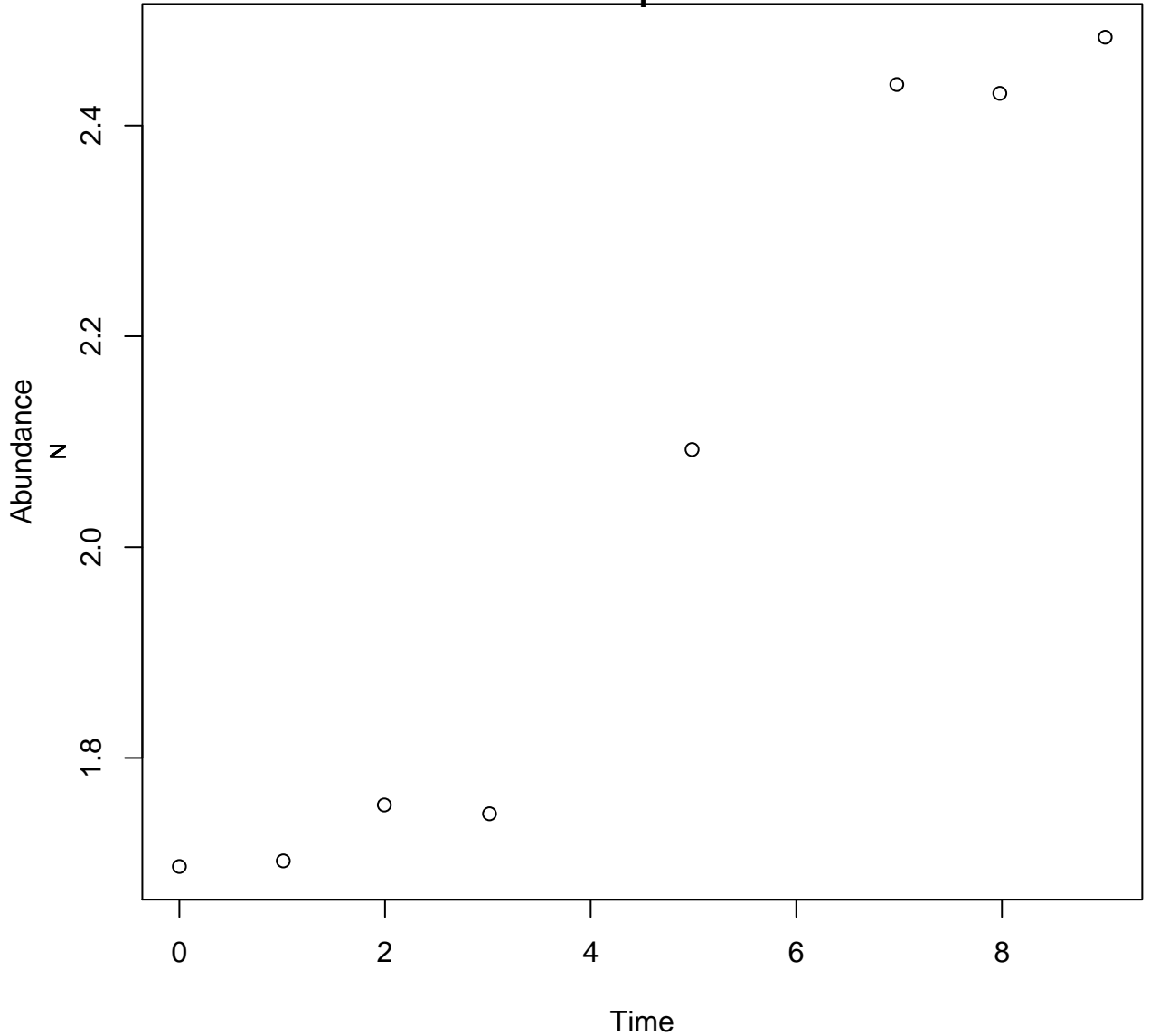


# Salmonella Typhimurium

## C02 Beef Striploins

### 12

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

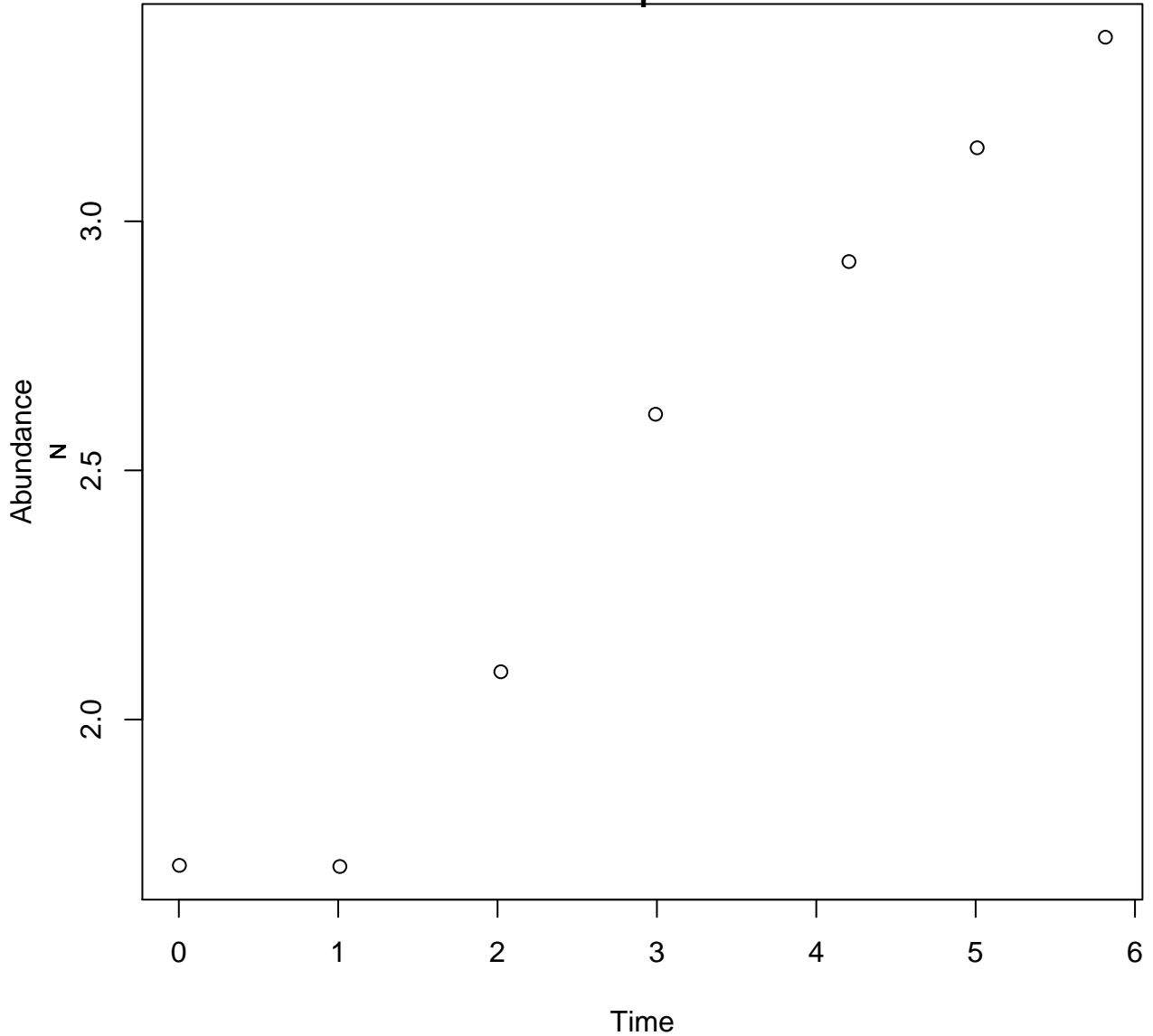


# Salmonella Typhimurium

## C02 Beef Striploins

### 15

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

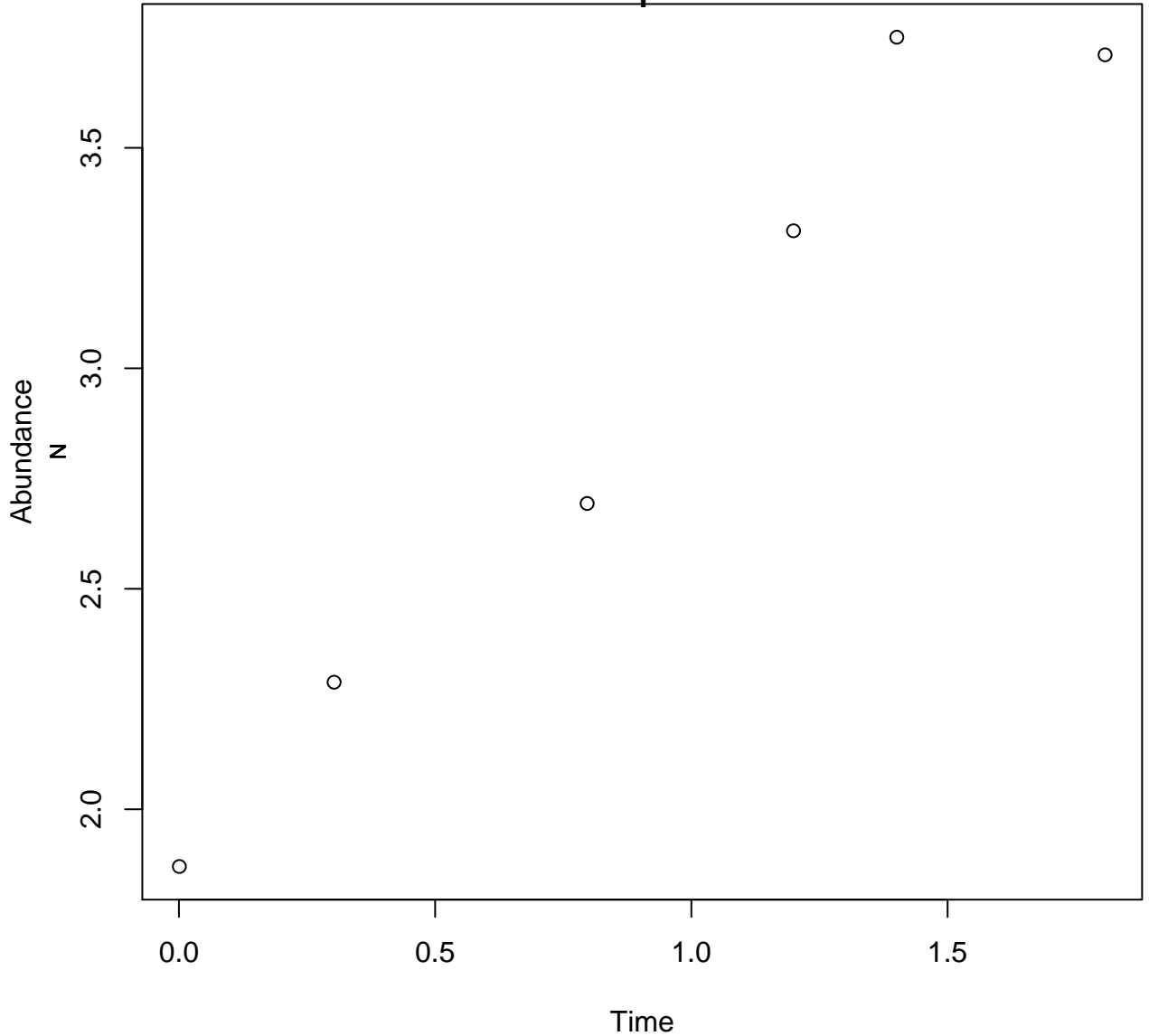


# Salmonella Typhimurium

## C02 Beef Striploins

### 20

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

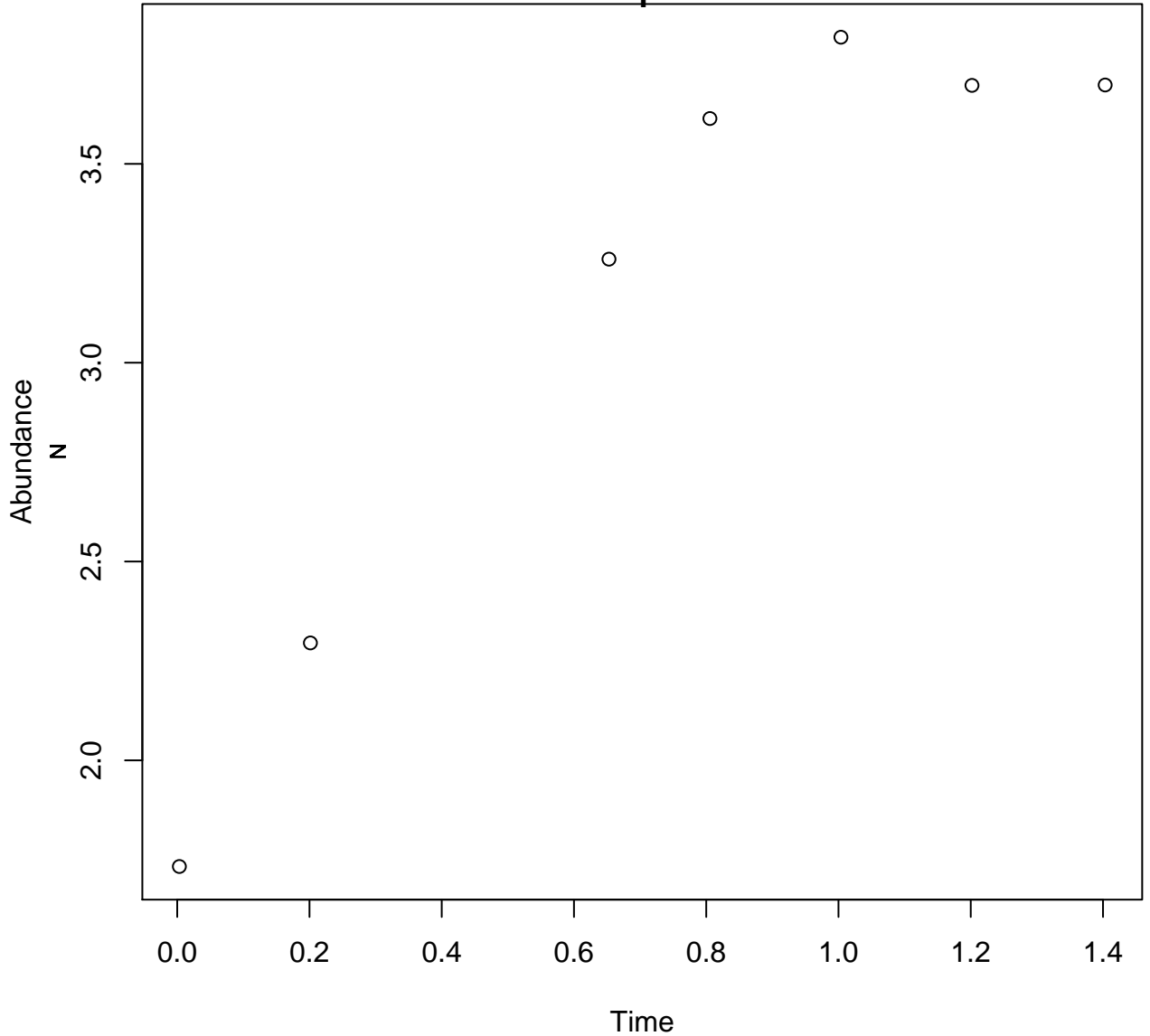


# Salmonella Typhimurium

## C02 Beef Striploins

### 30

Gill, C.O. and DeLacy, K.M., 1991. Growth of *Escherichia coli* and *Salmonella typhimurium* on high-pH beef packed under vacuum or carbon dioxide. *International journal of food microbiology*, 13(1), pp.21-30.

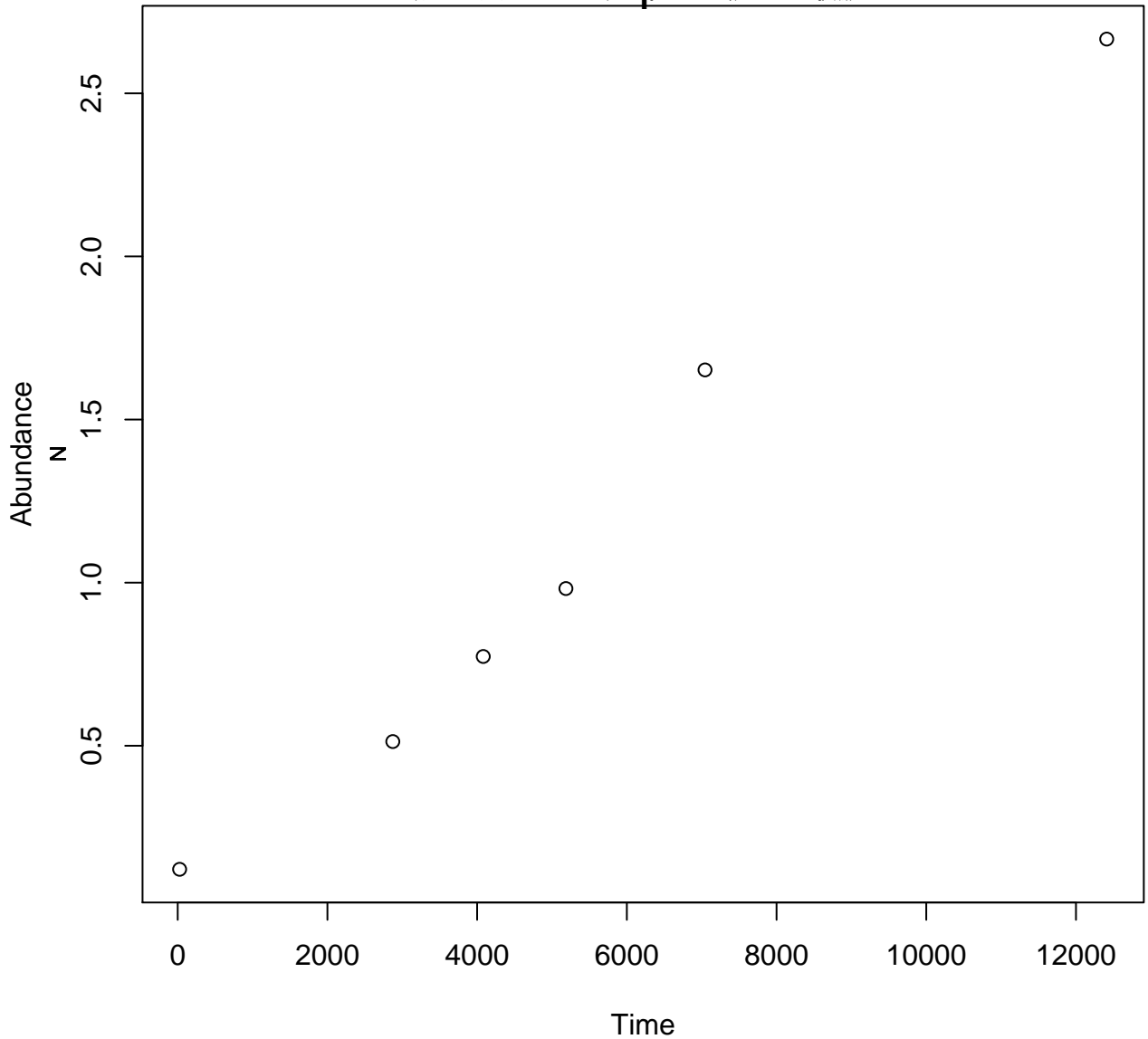


# *Serratia marcescens* Pasteurised Skim Milk

6

1

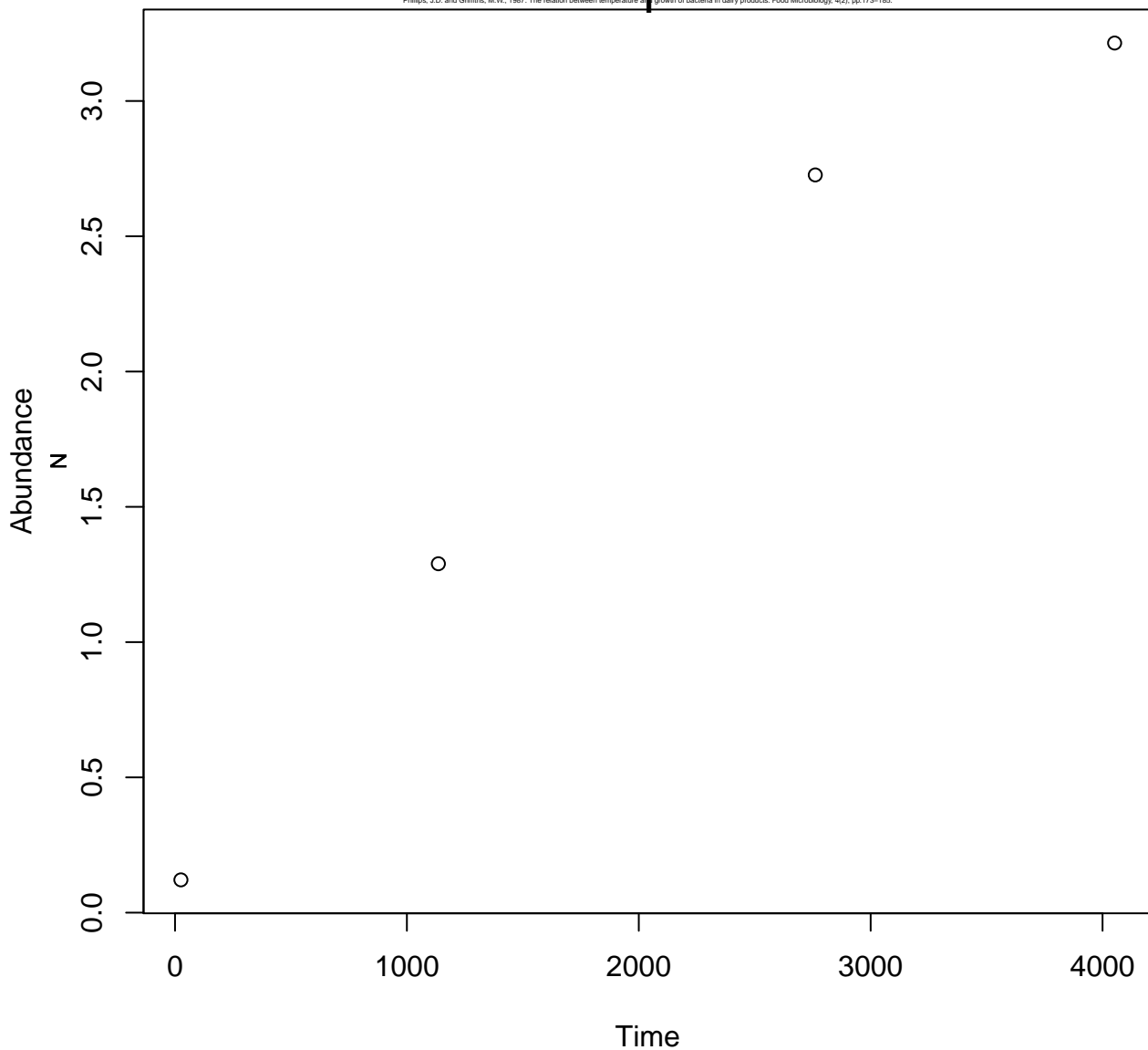
Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.



# *Serratia marcescens* Pasteurised Skim Milk

10

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.

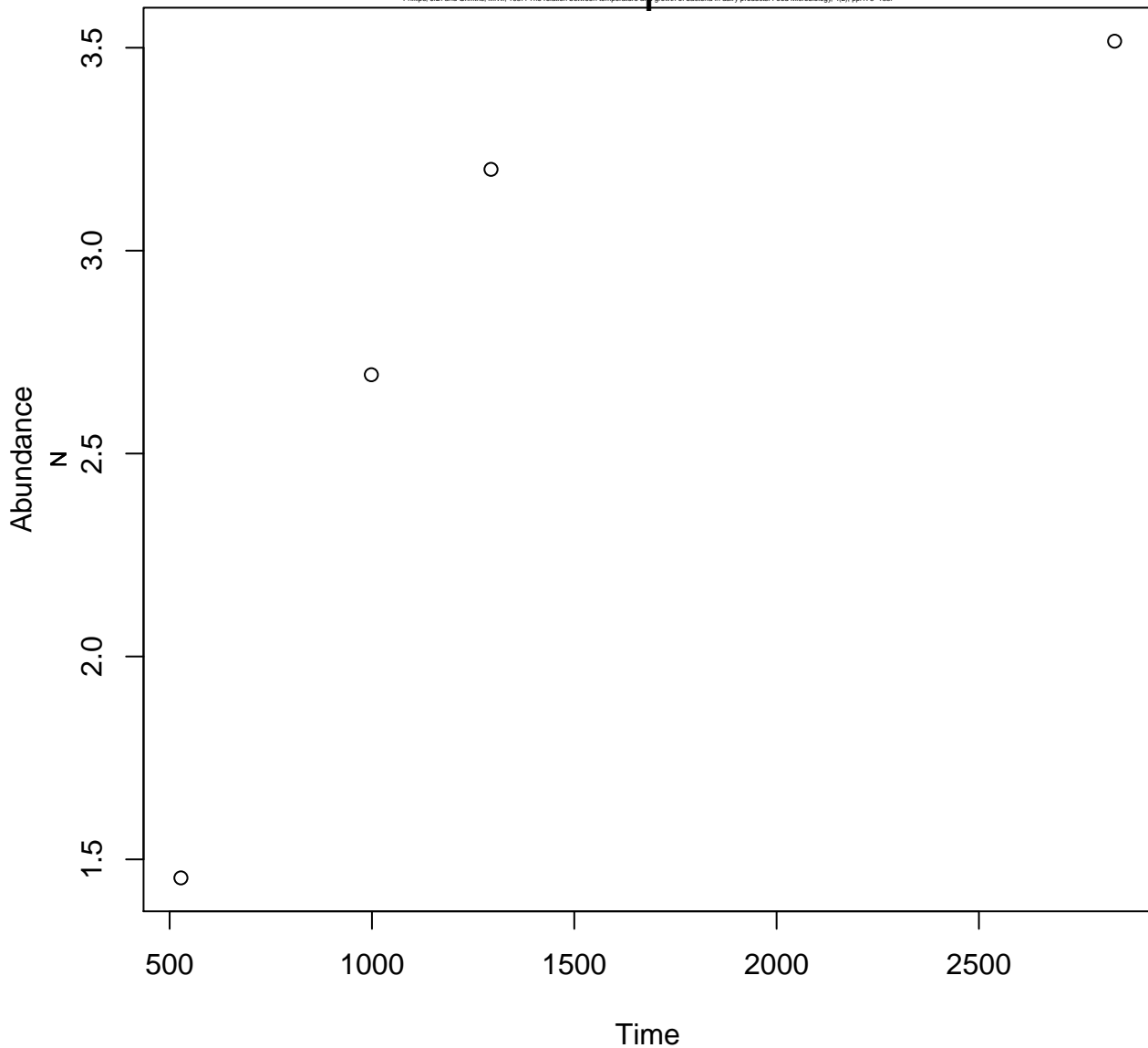


# Serratia marcescens

## Pasteurised Skim Milk

### 15

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.





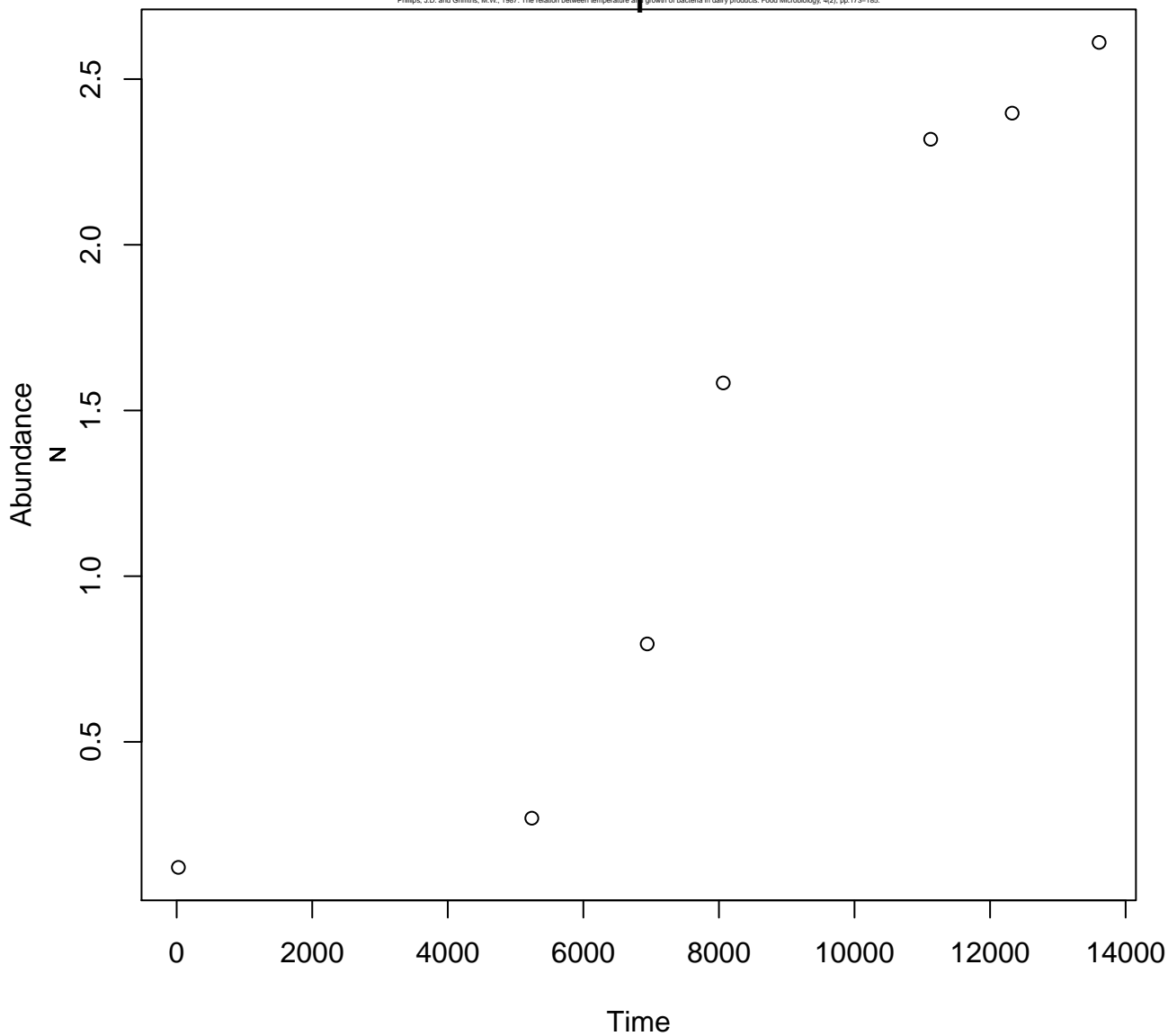
# *Serratia marcescens*

## UHT Skim Milk

6

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.



# *Serratia marcescens*

## UHT Skim Milk

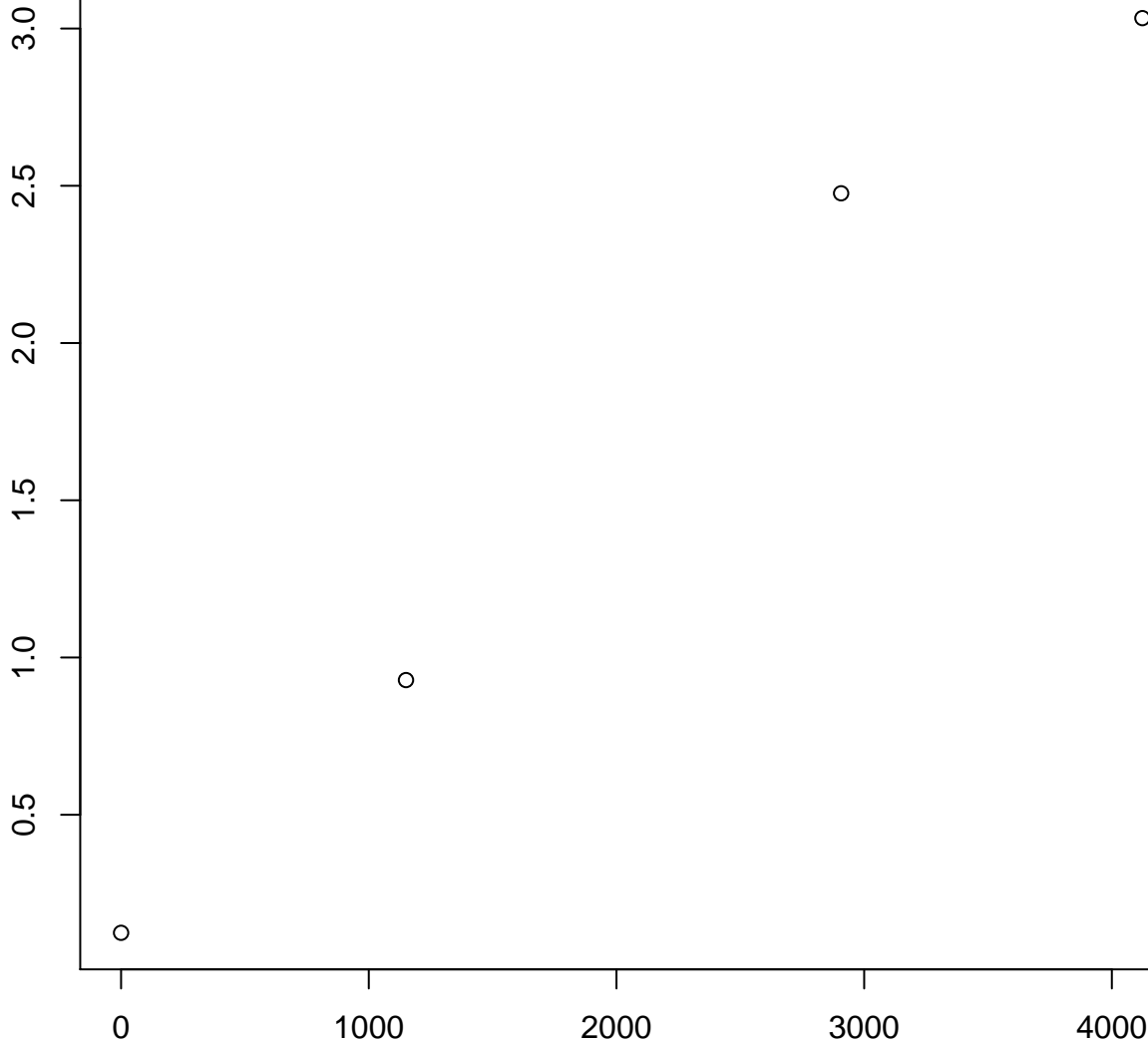
10

1

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.

Abundance

N



Time

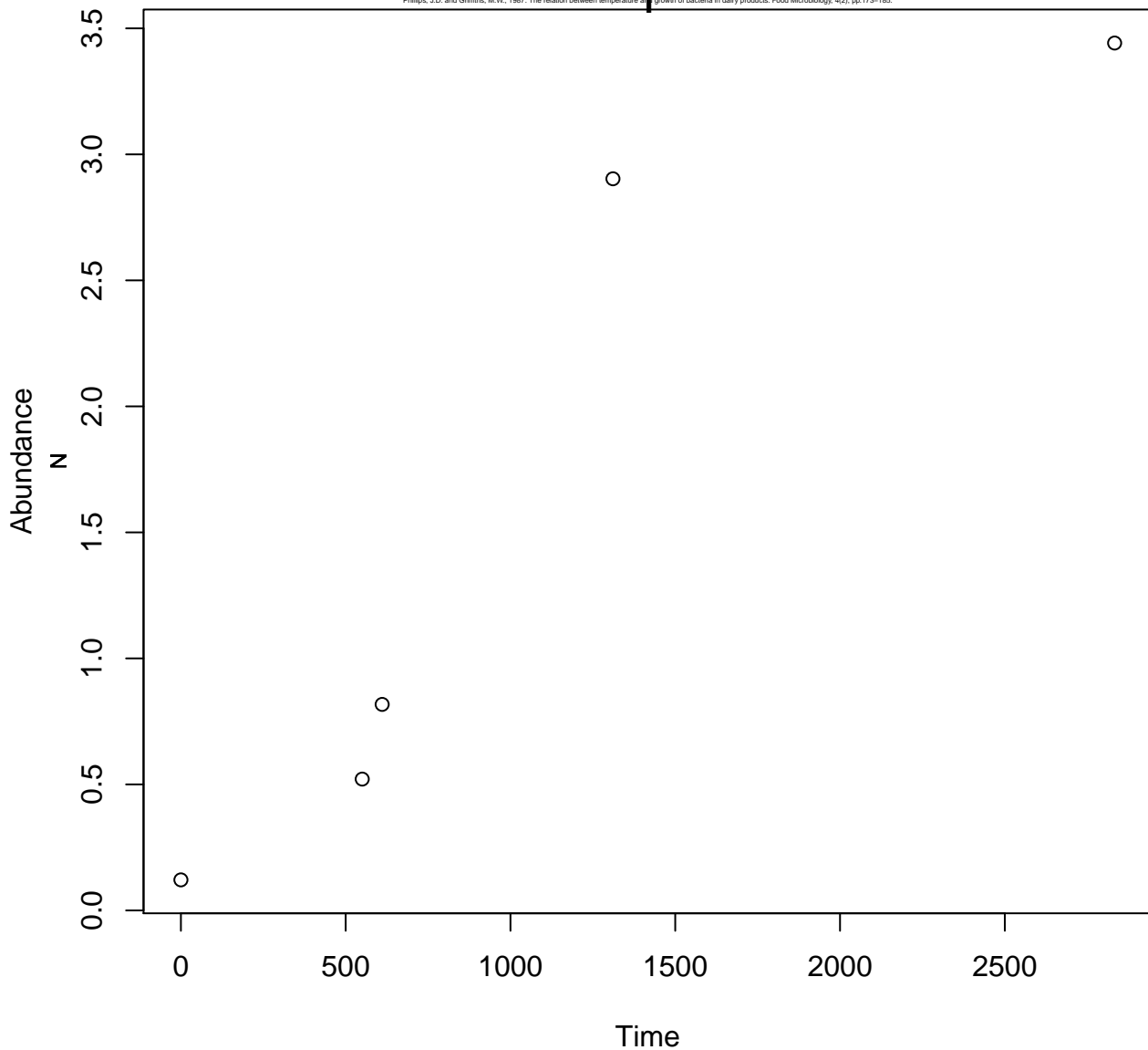
# *Serratia marcescens*

## UHT Skim Milk

15

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.

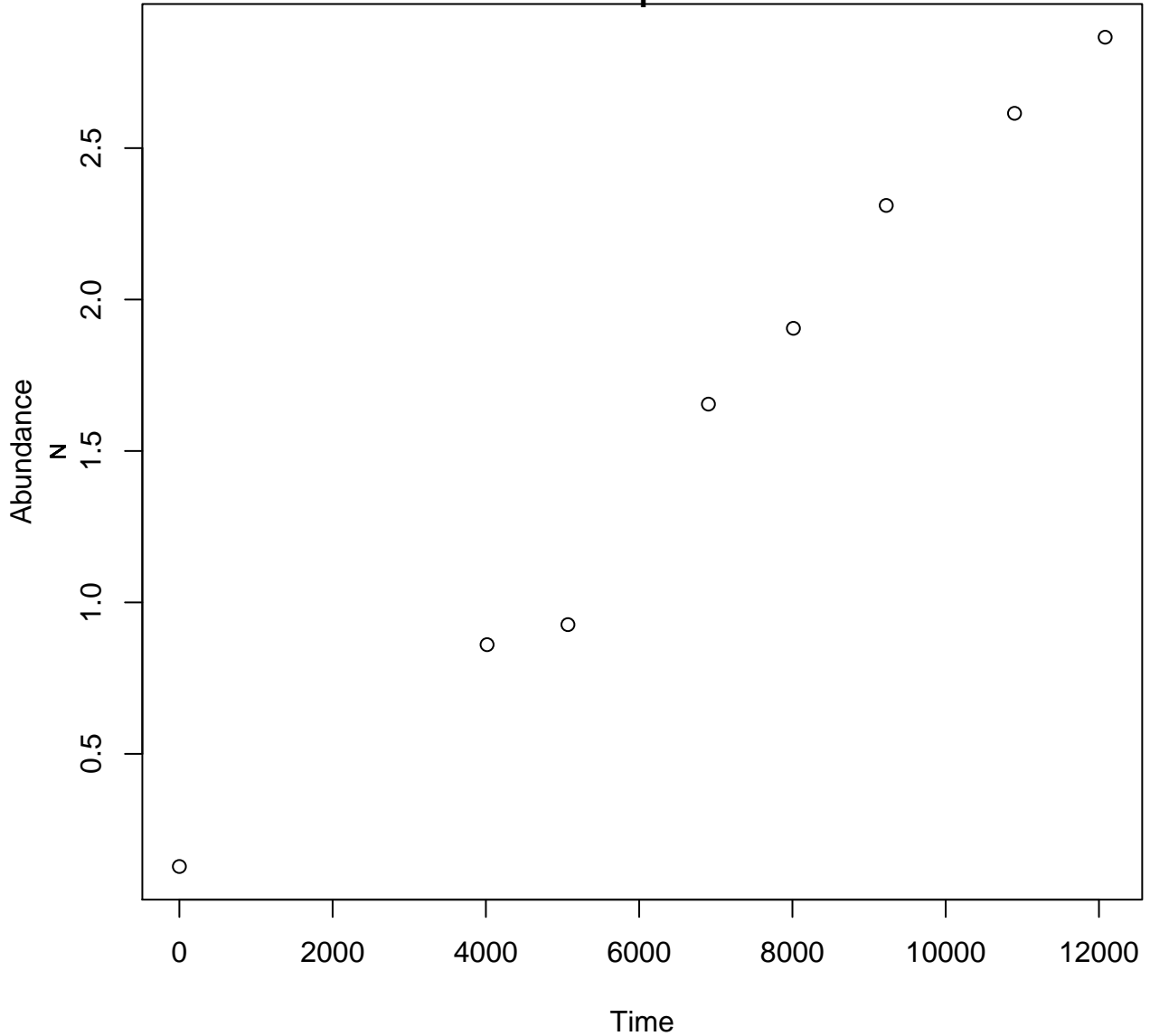


# *Serratia marcescens* Pasteurised Full-fat Milk

6

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.

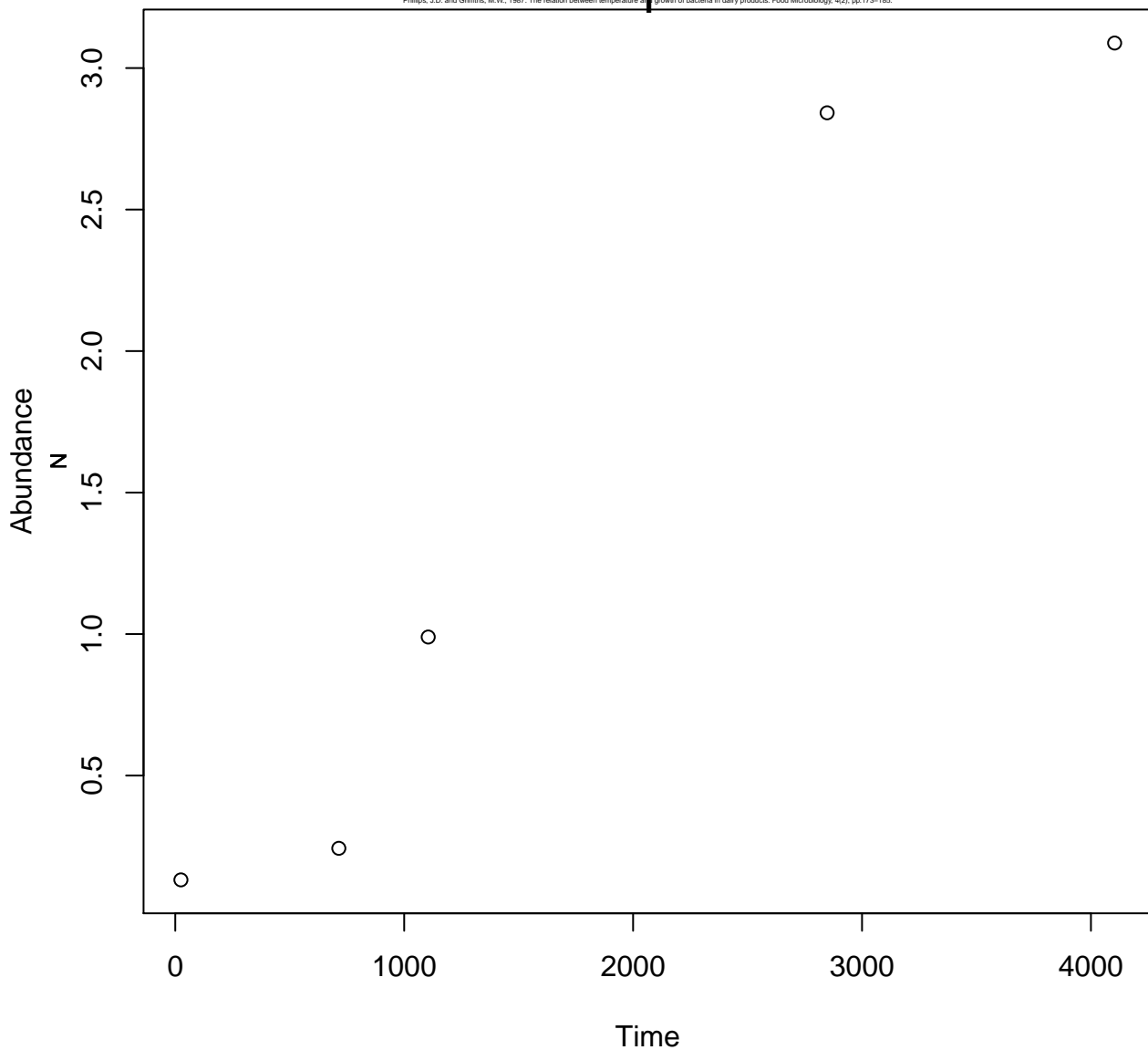


# Serratia marcescens

## Pasteurised Full-fat Milk

### 10

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.

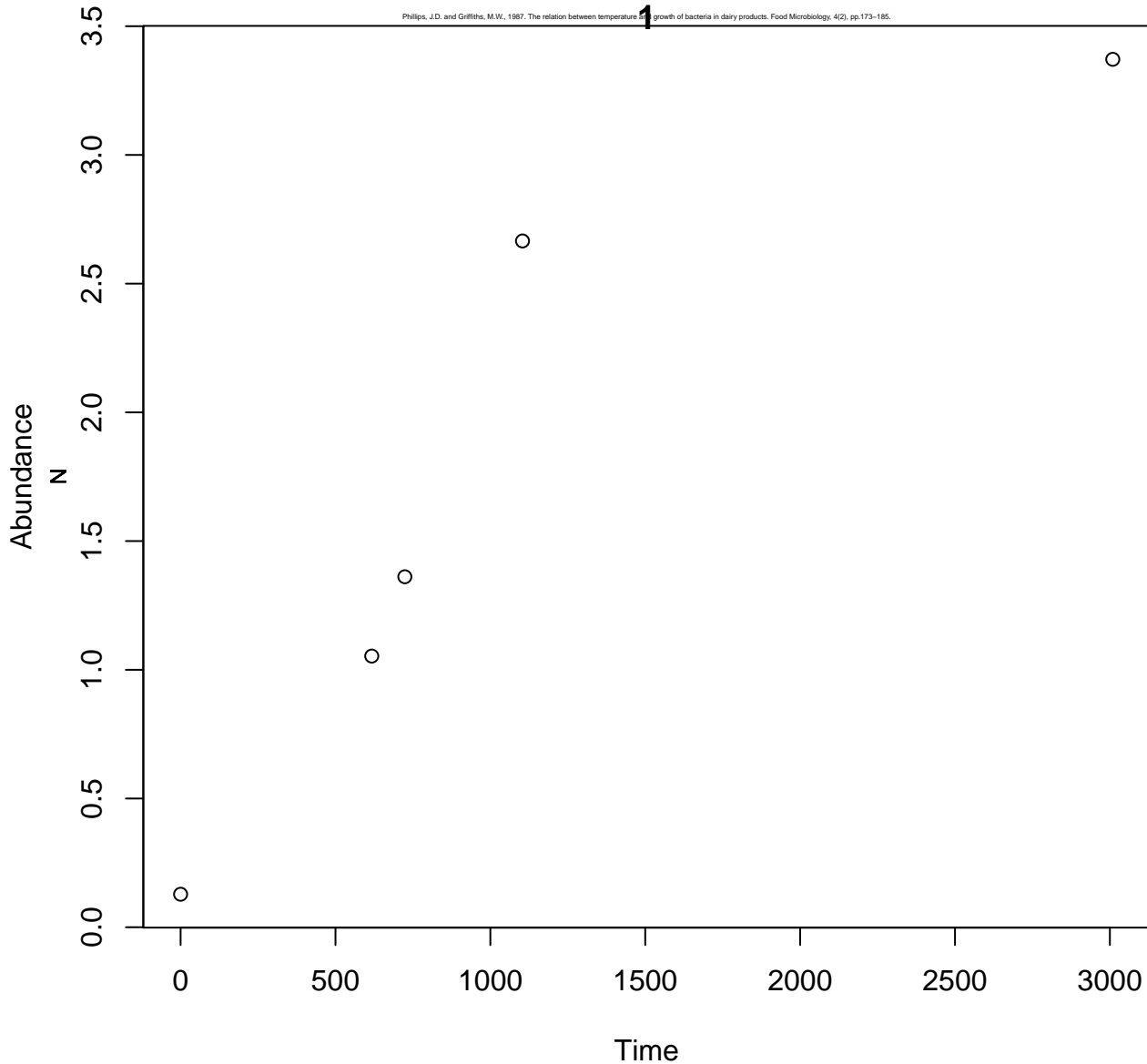


# Serratia marcescens

## Pasteurised Full-fat Milk

### 15

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.



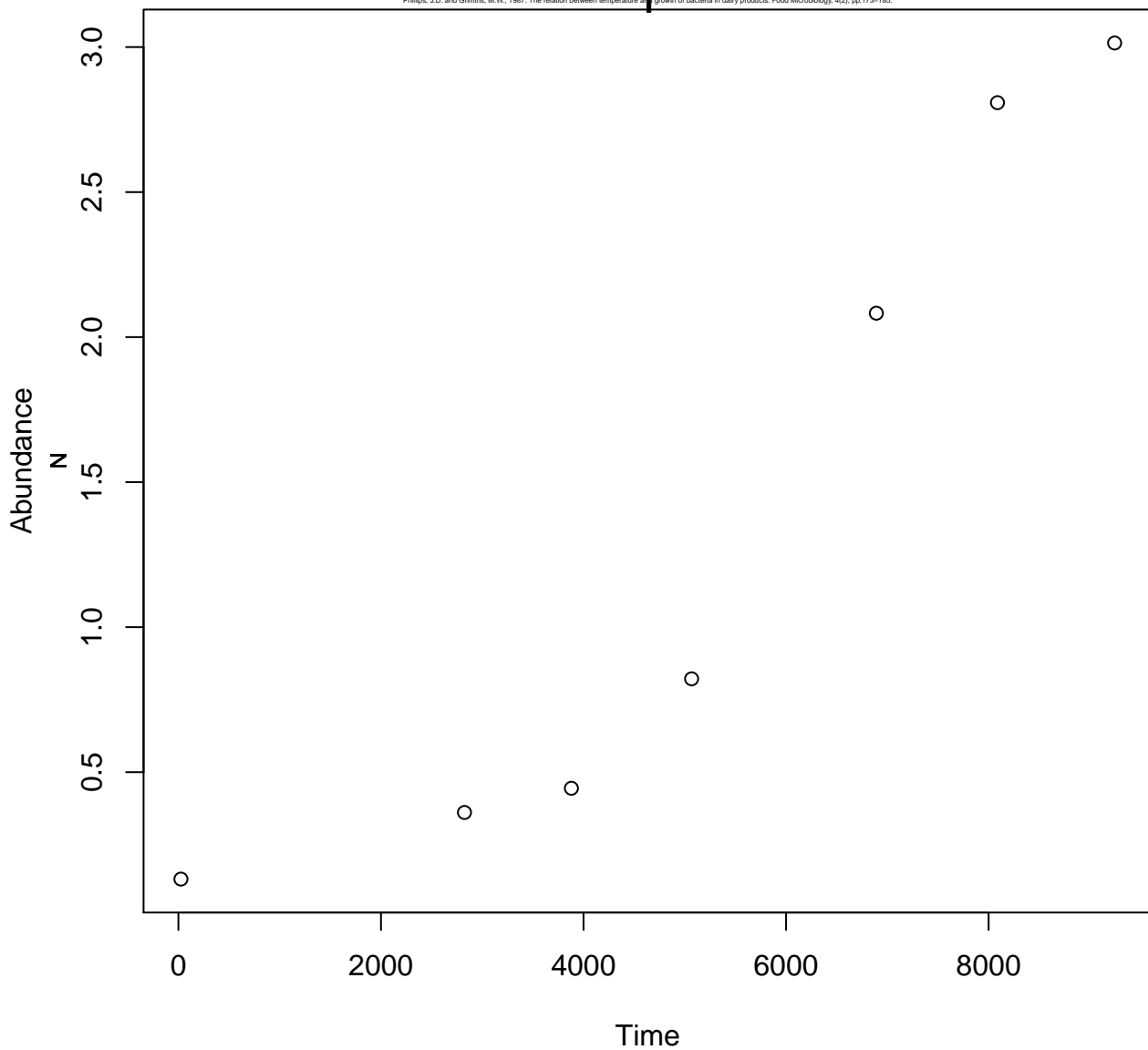
# *Serratia marcescens*

## UHT Full-fat Milk

6

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.



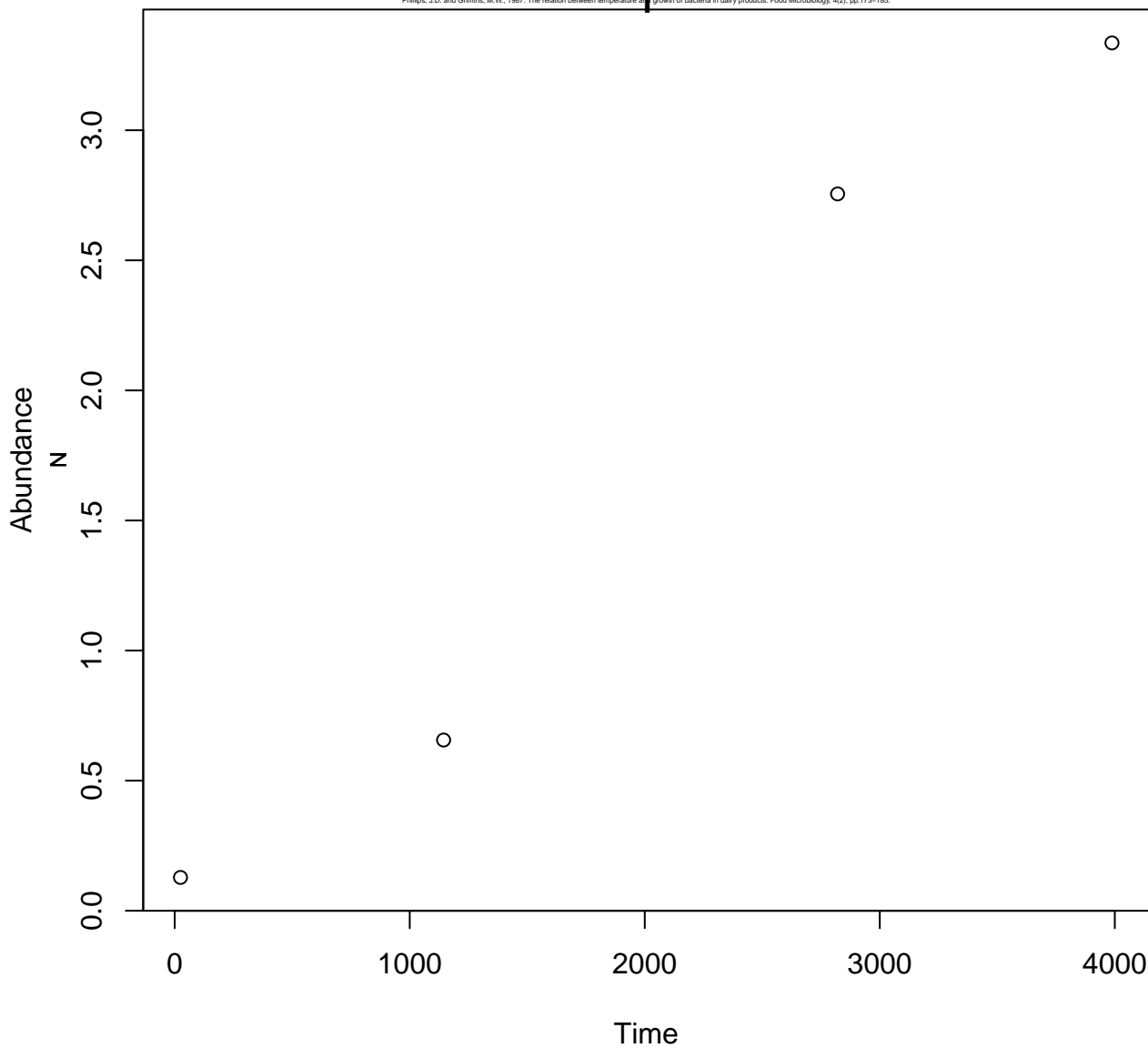
# *Serratia marcescens*

## UHT Full-fat Milk

10

1

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.





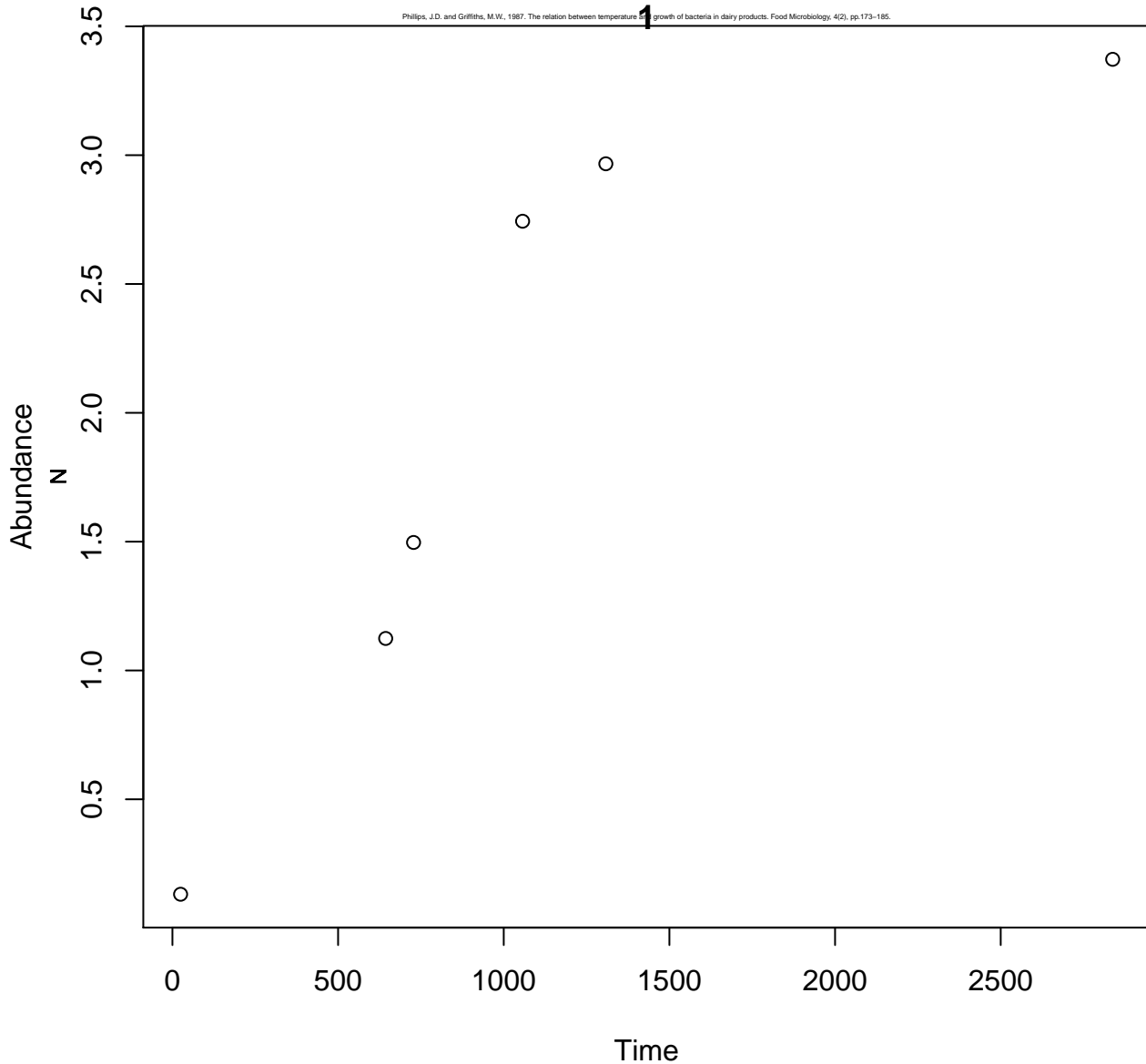
# *Serratia marcescens*

## UHT Full-fat Milk

15

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.



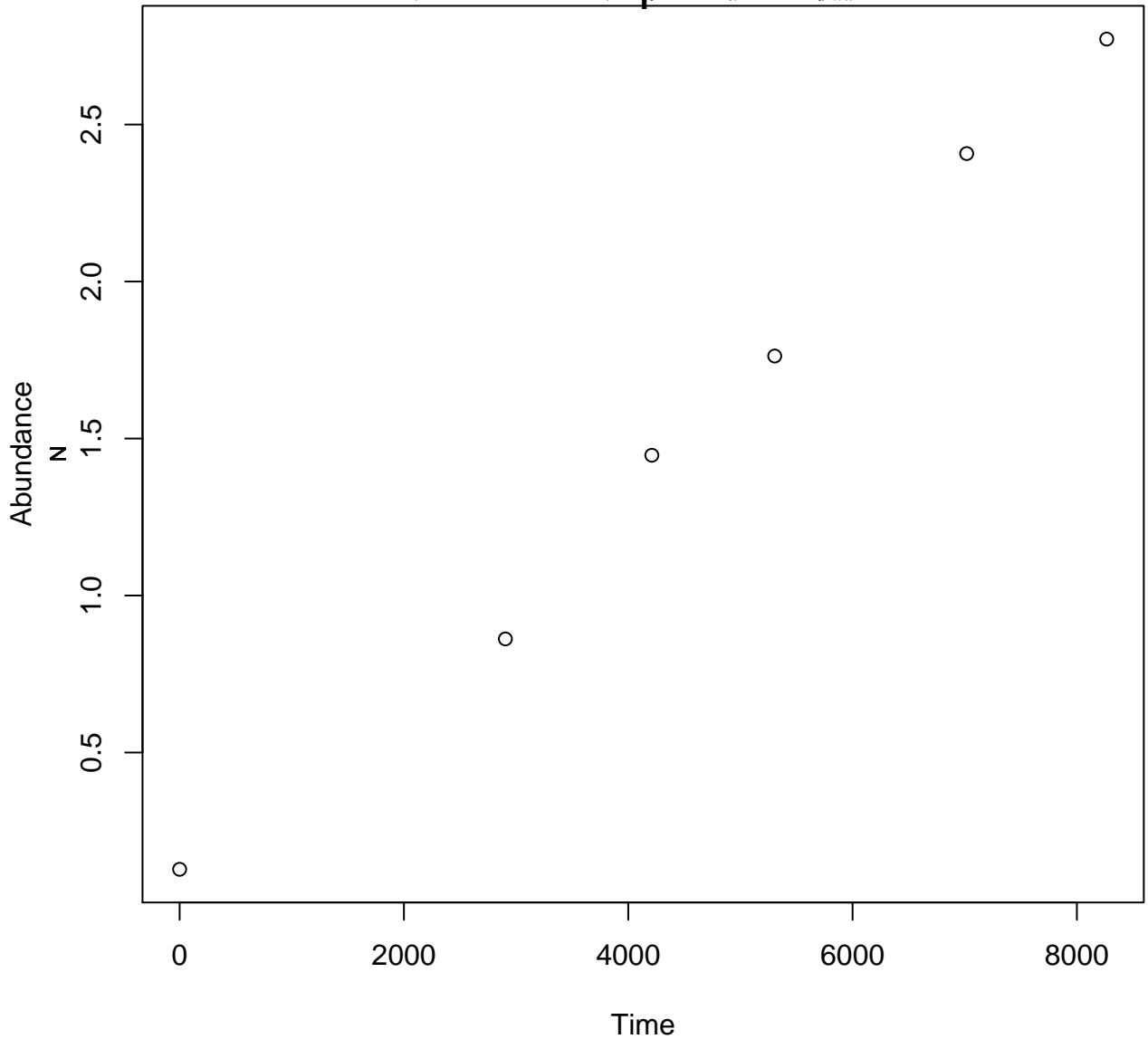
# Serratia marcescens

## Pasteurised Double Cream

6

1

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.

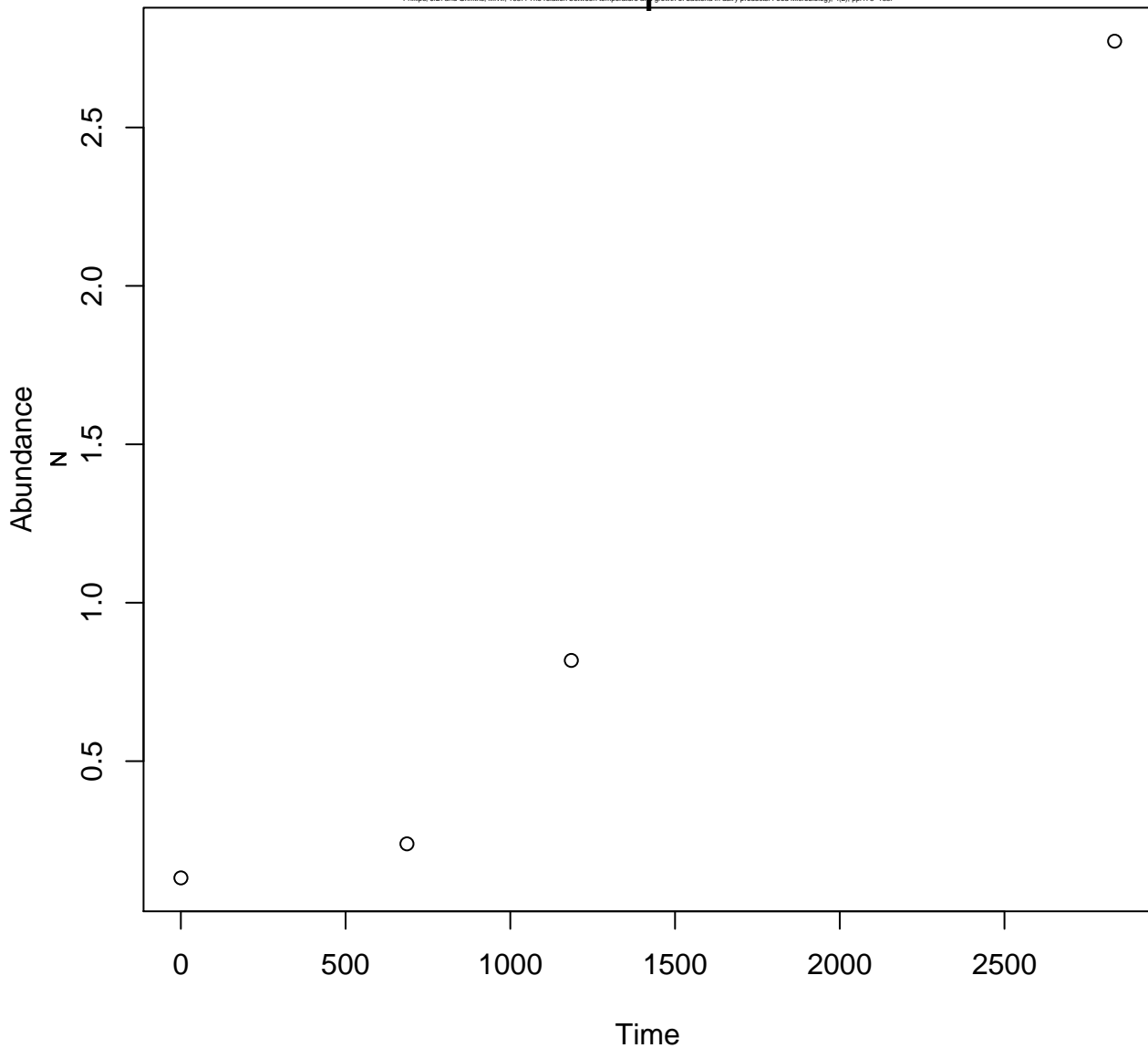


# Serratia marcescens

## Pasteurised Double Cream

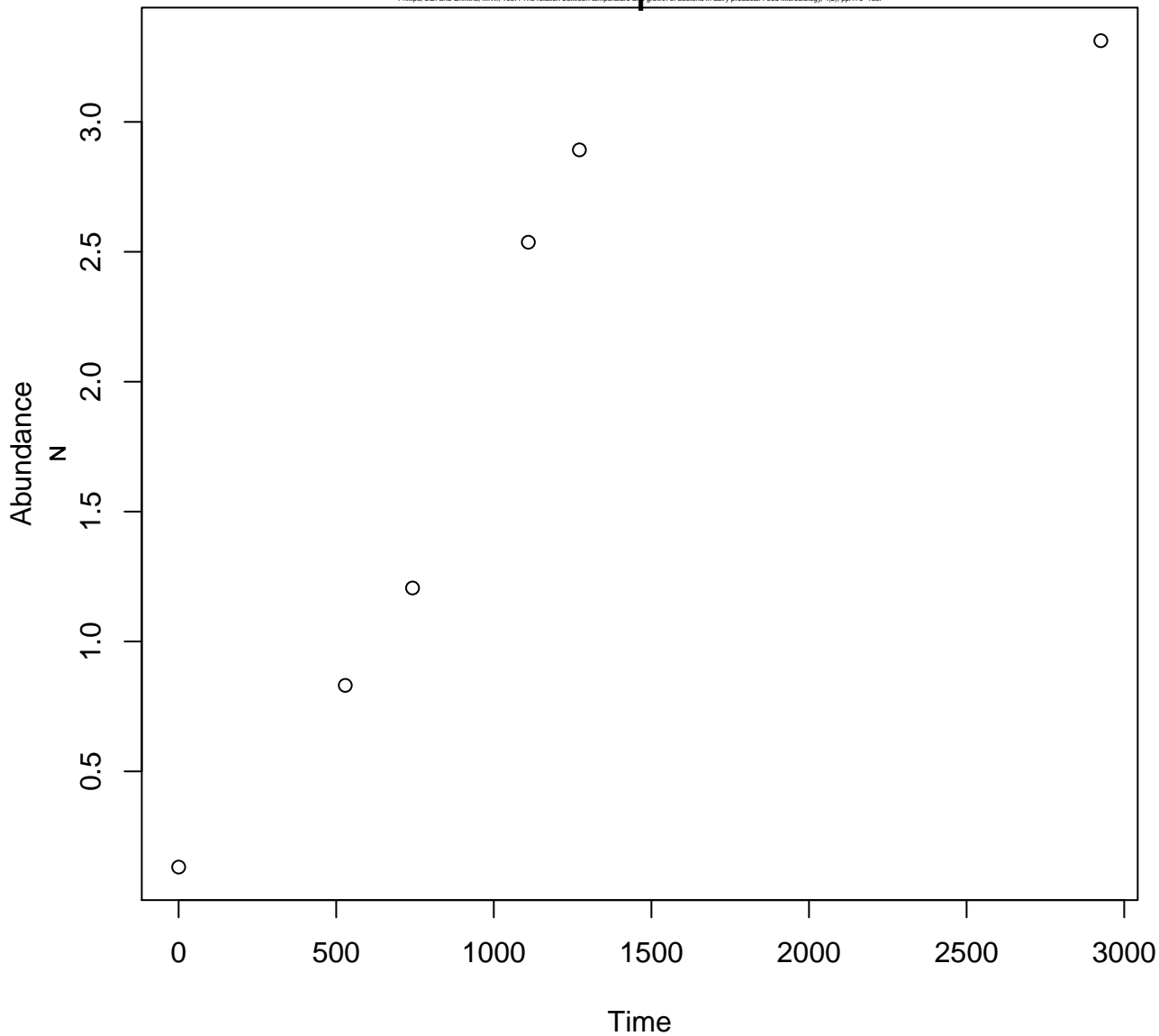
### 10

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.



**Serratia marcescens**  
**Pasteurised Double Cream**  
**15**

Philips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology, 4(2), pp.173-185.



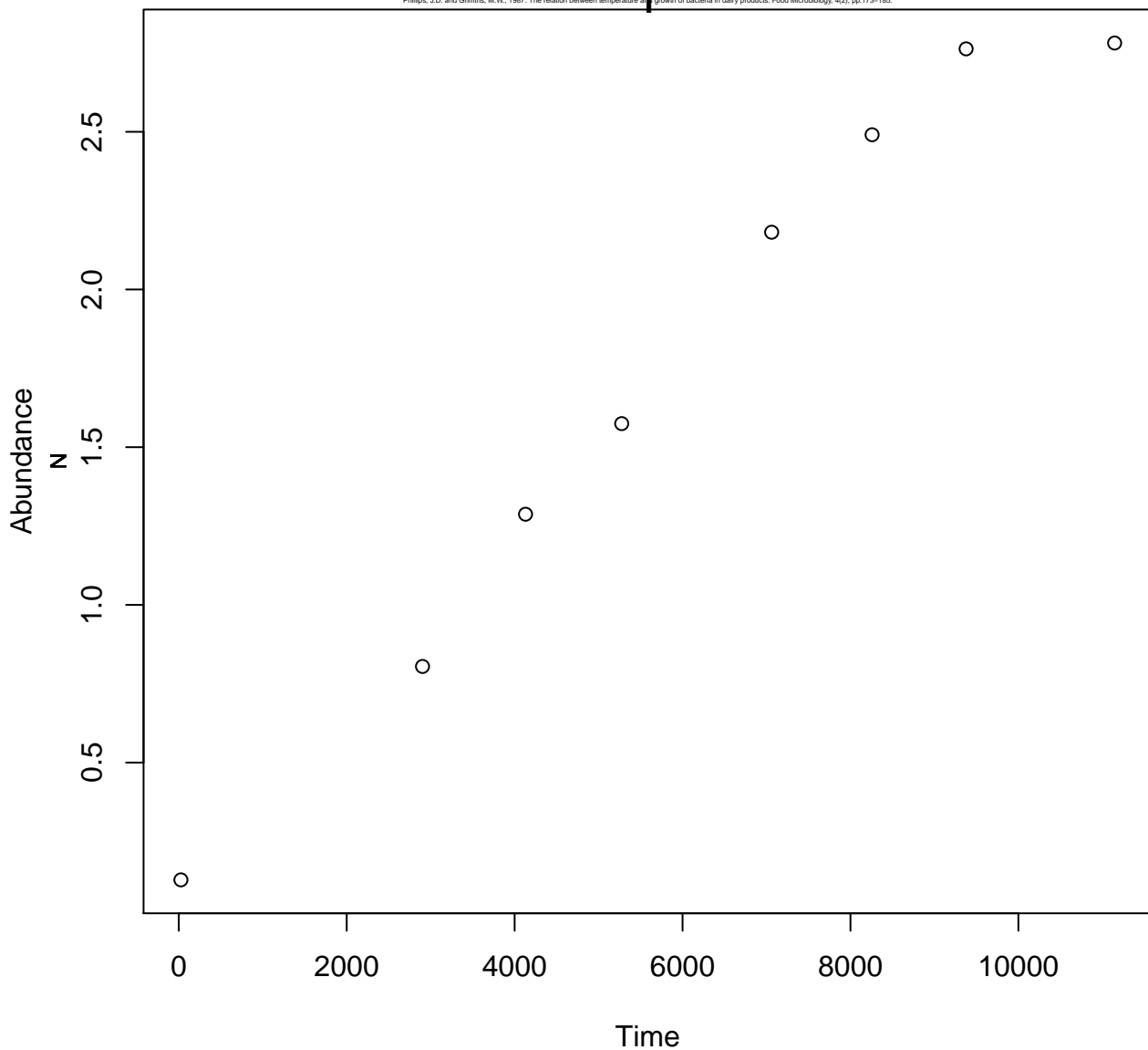
# Serratia marcescens

## UHT Double Cream

6

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.



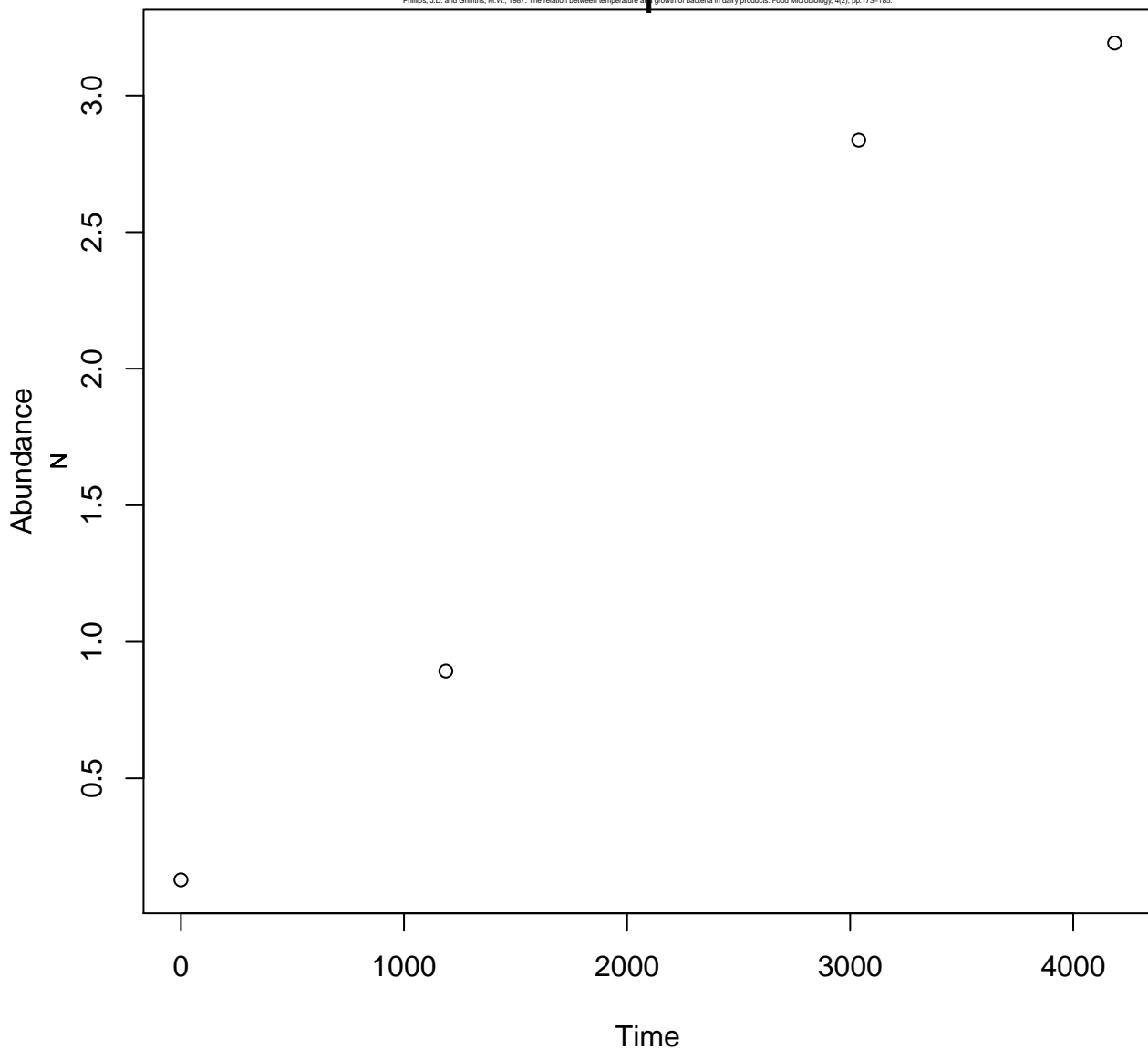
# *Serratia marcescens*

## UHT Double Cream

10

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.



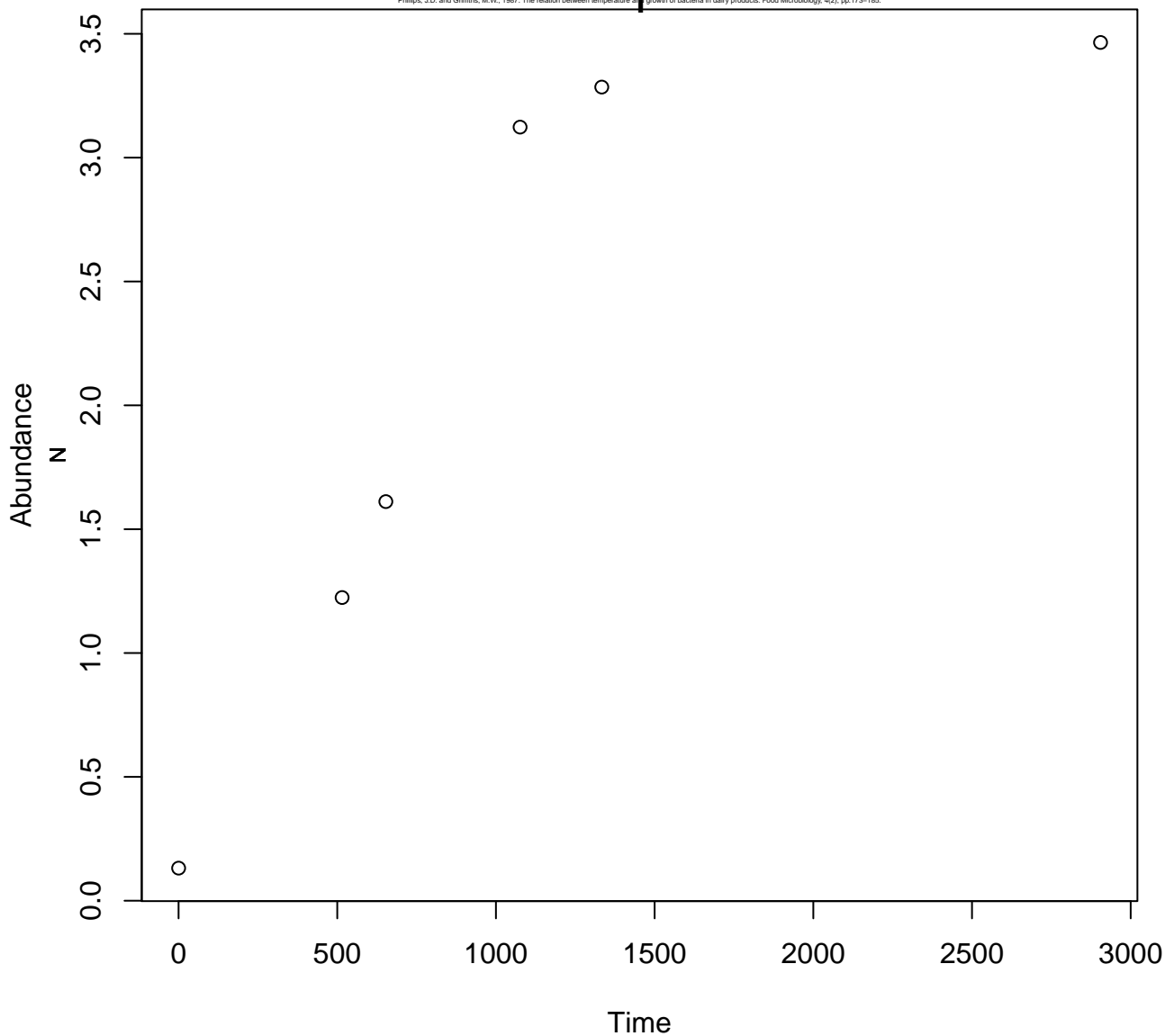
# *Serratia marcescens*

## UHT Double Cream

15

1

Phillips, J.D. and Griffiths, M.W., 1967. The relation between temperature and growth of bacteria in dairy products. Food Microbiology 4(2), pp.173-185.



# Arthrobacter sp. 77

TGE agar

0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU

0.5  
1.0  
1.5  
2.0  
2.5

0

100

200

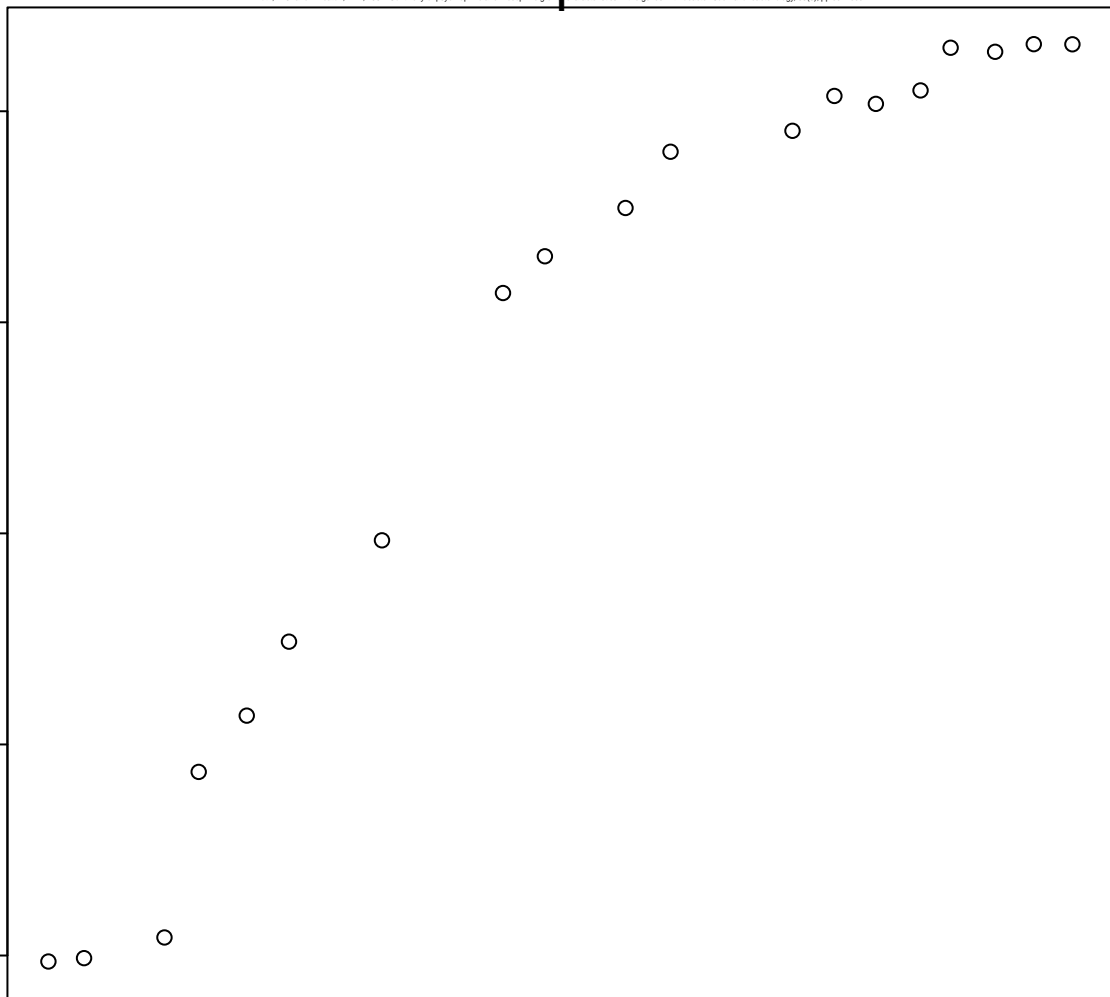
300

400

500

600

Time





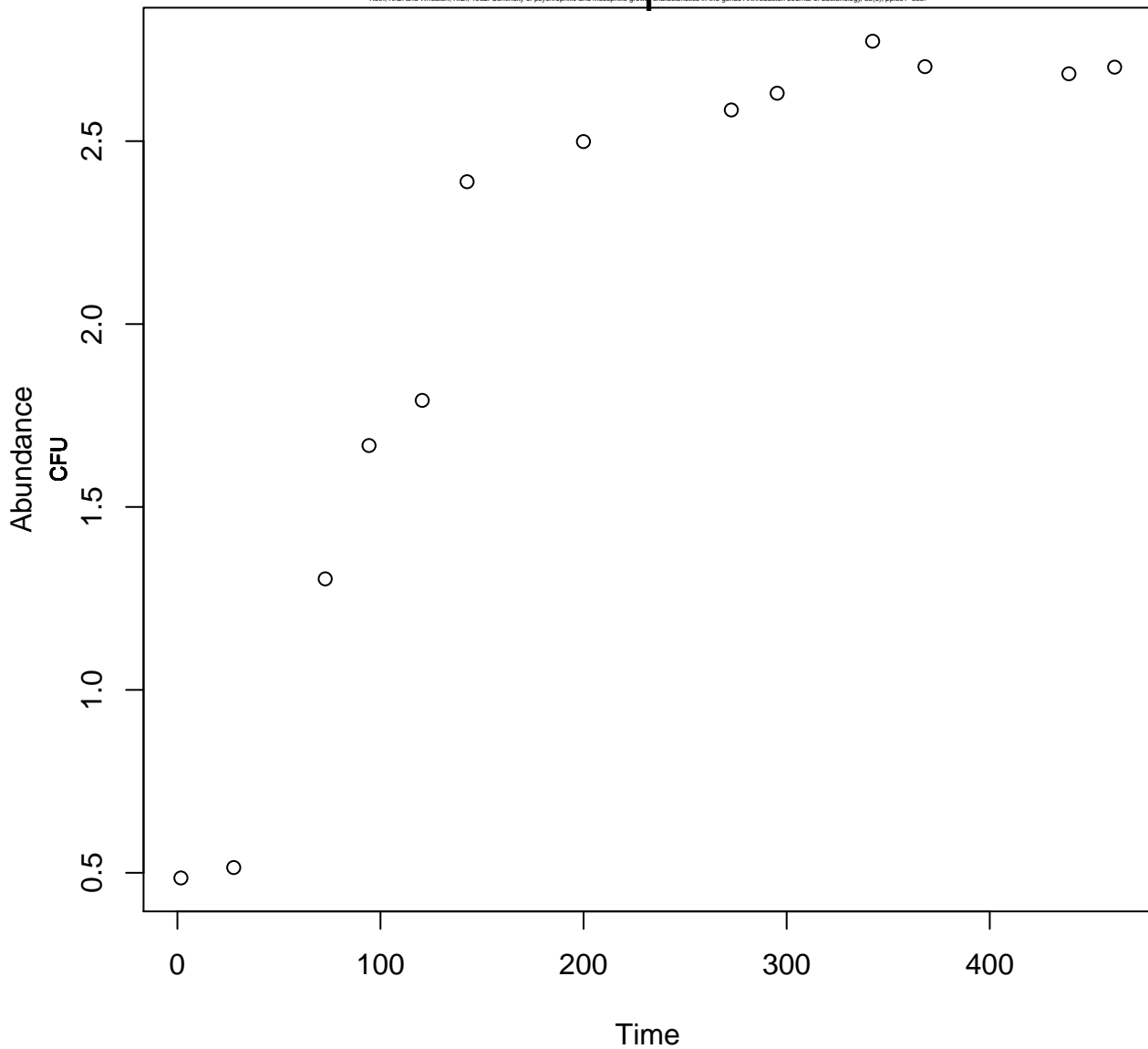
# Arthrobacter sp. 77

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



**Arthrobacter sp. 77**

**TGE agar**

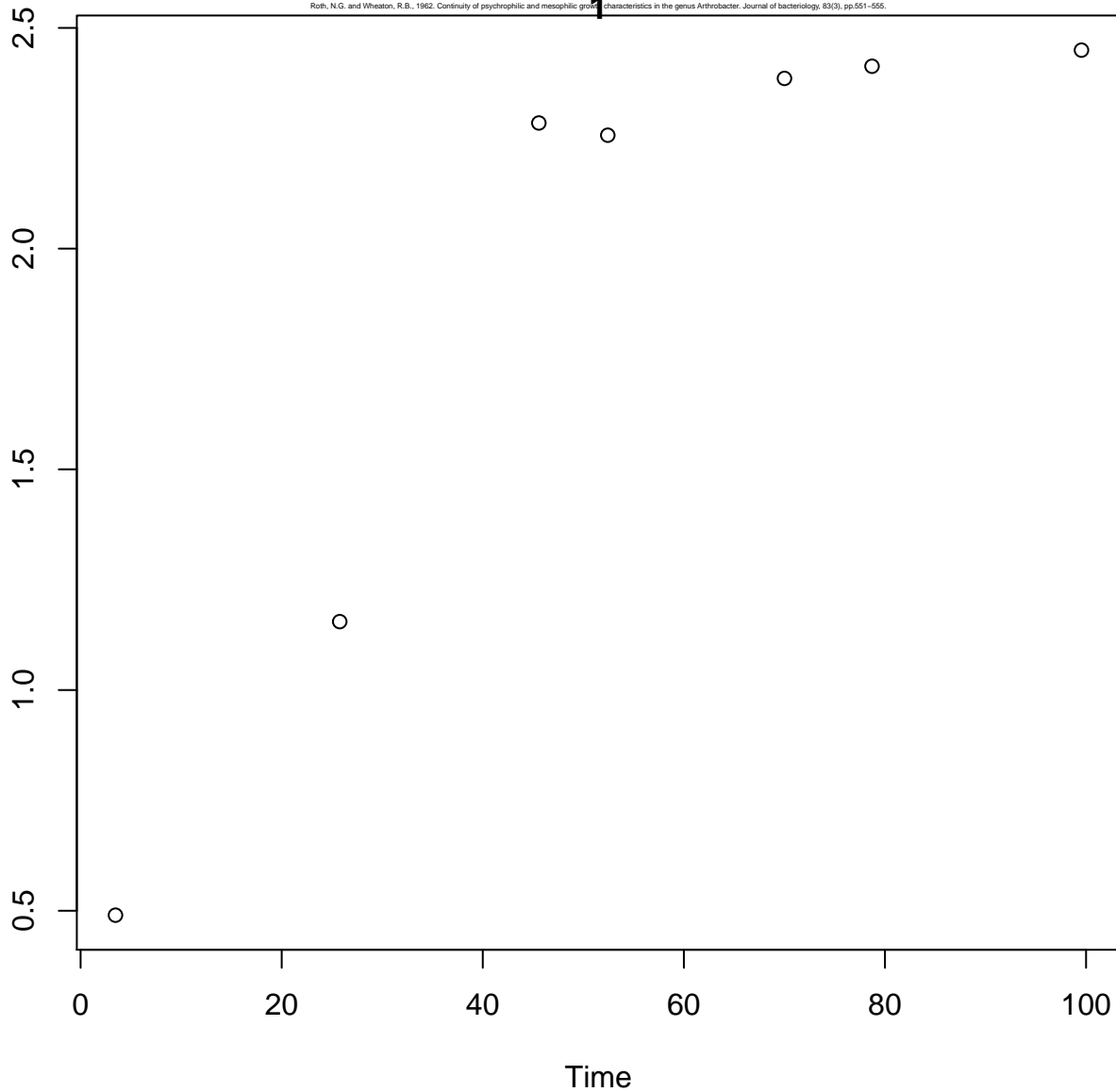
**20**

**1**

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU



Arthrobacter sp. 77

TGE agar

30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU

2.0

1.5

1.0

0.5

0

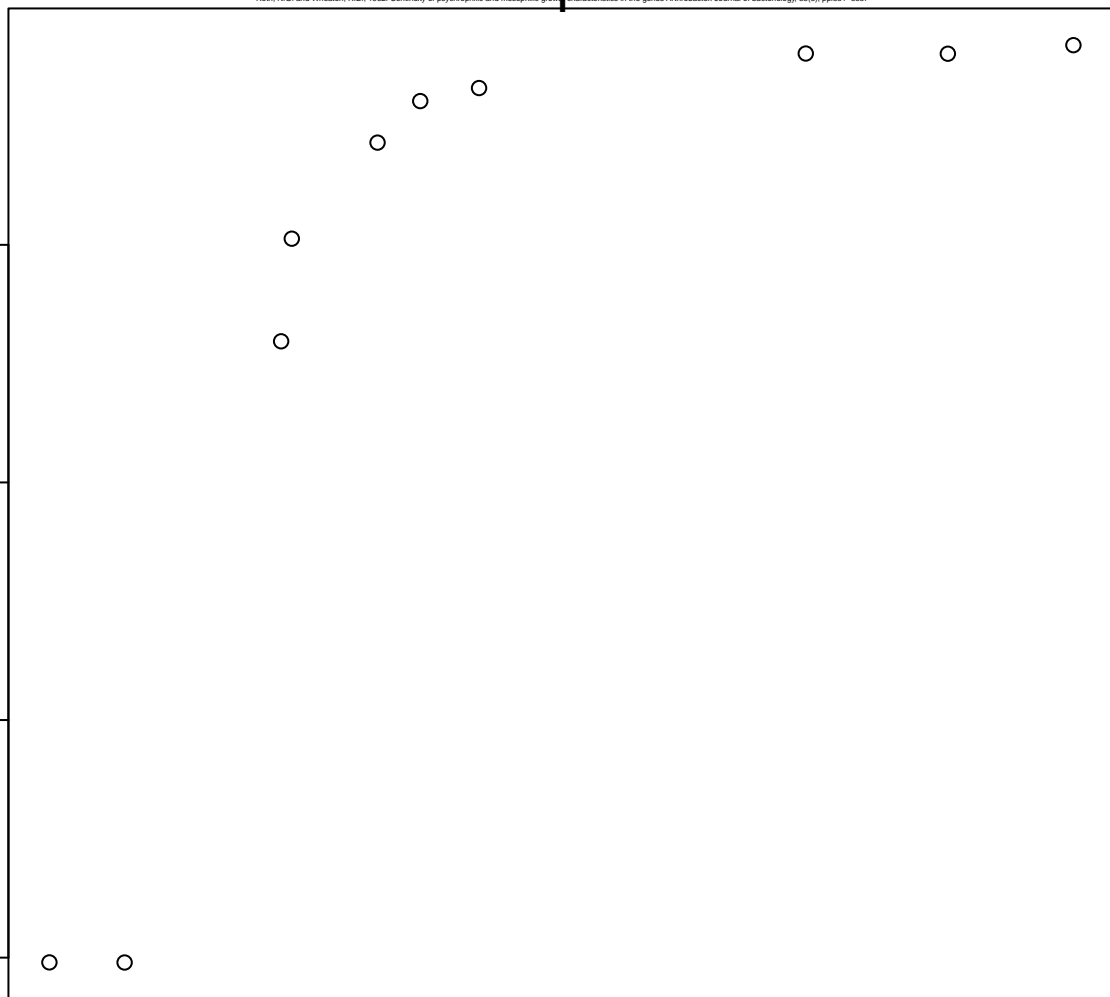
50

100

150

200

Time



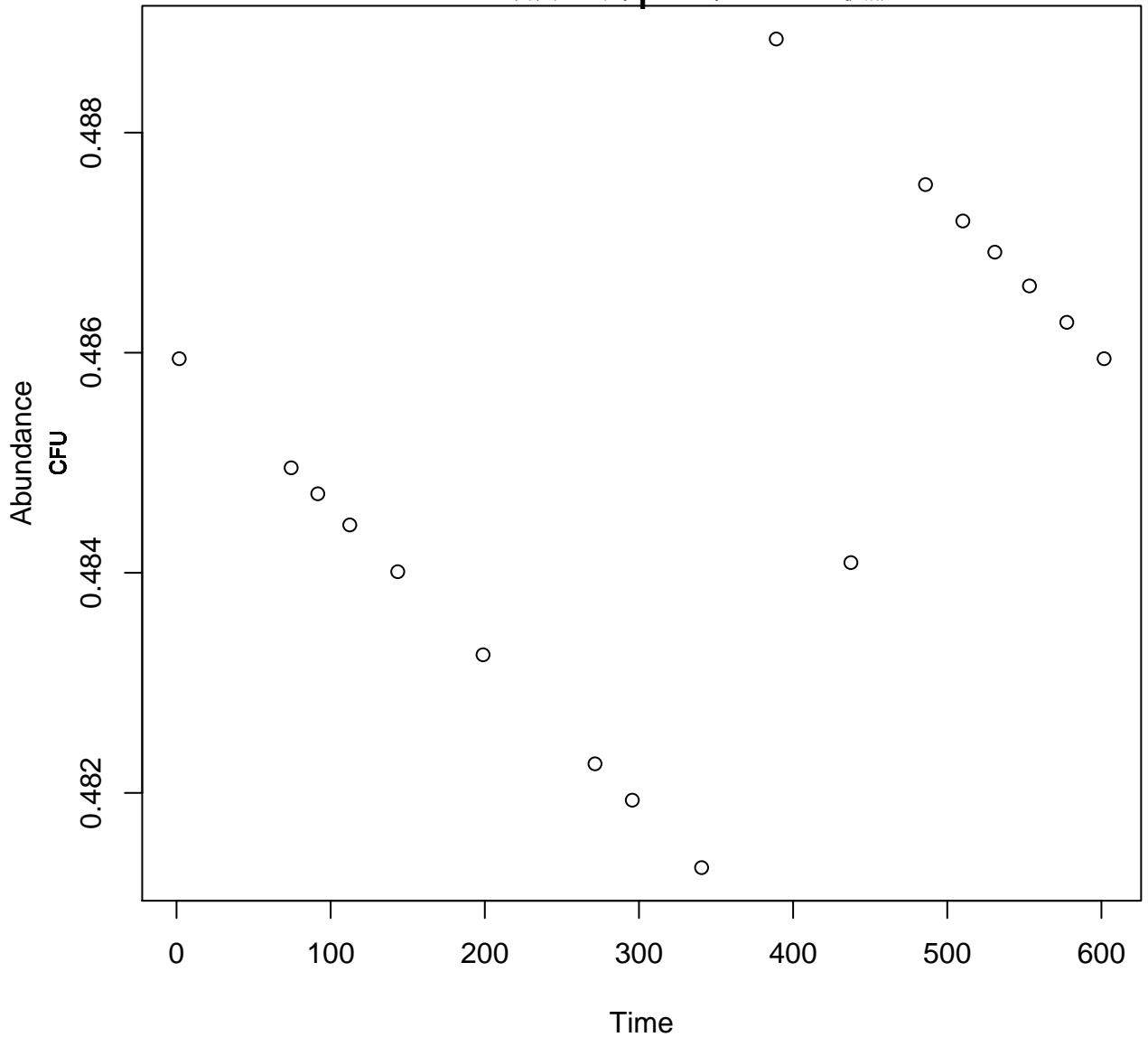
**Arthrobacter sp. 77**

**TGE agar**

**37**

**1**

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



# Arthrobacter sp. 88

TGE agar

0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU

2.0

1.5

1.0

0.5

Time

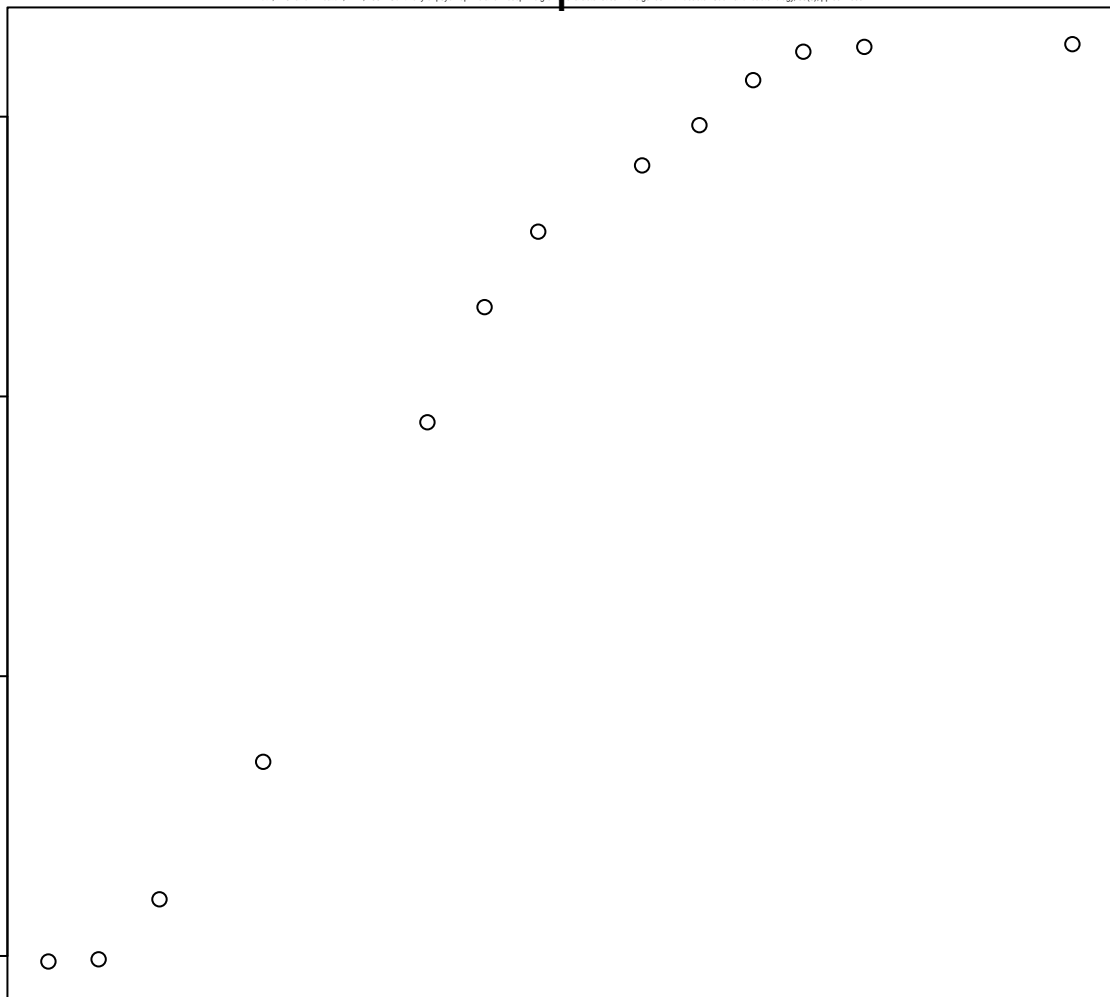
100

200

300

400

500



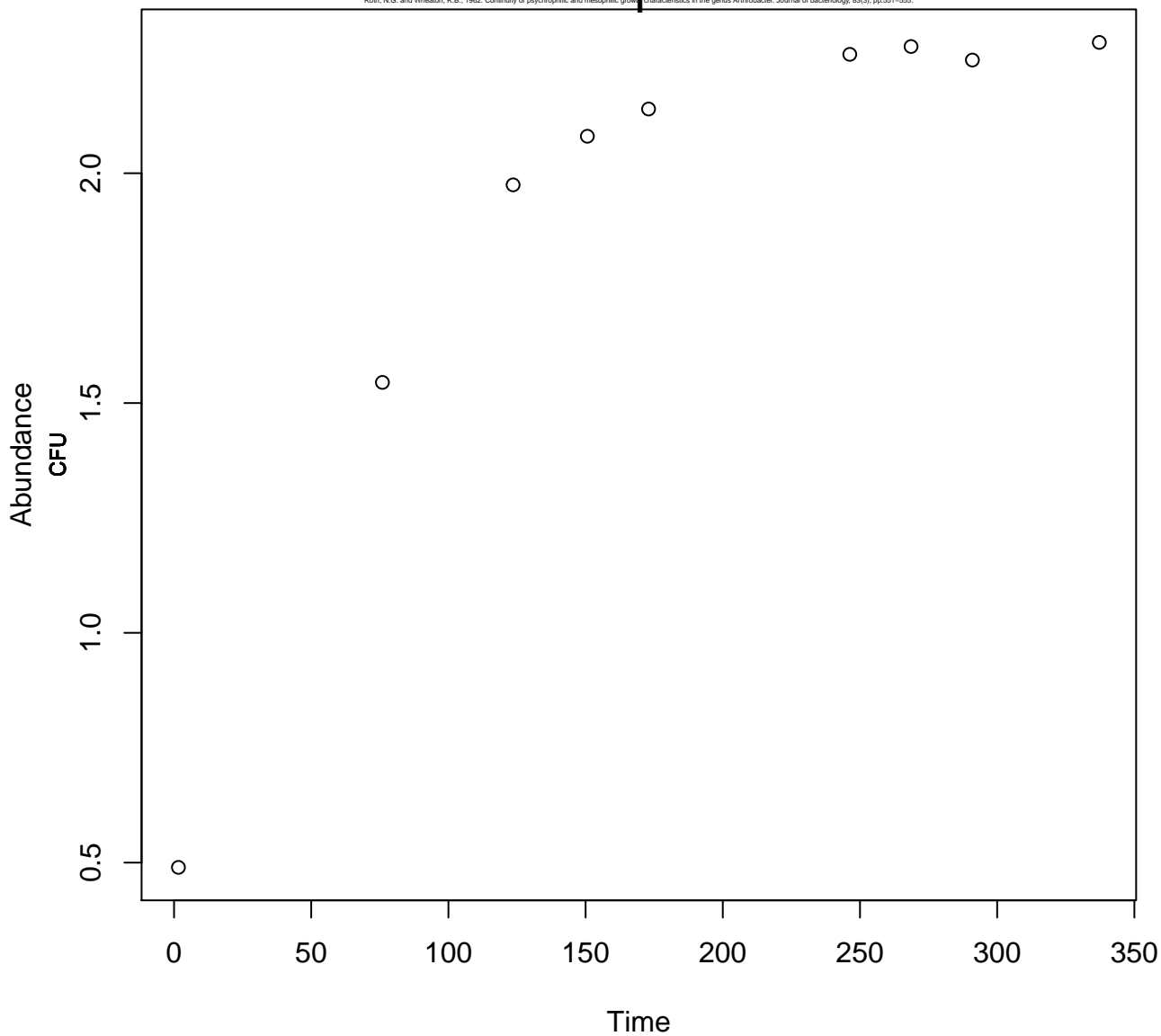
# Arthrobacter sp. 88

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



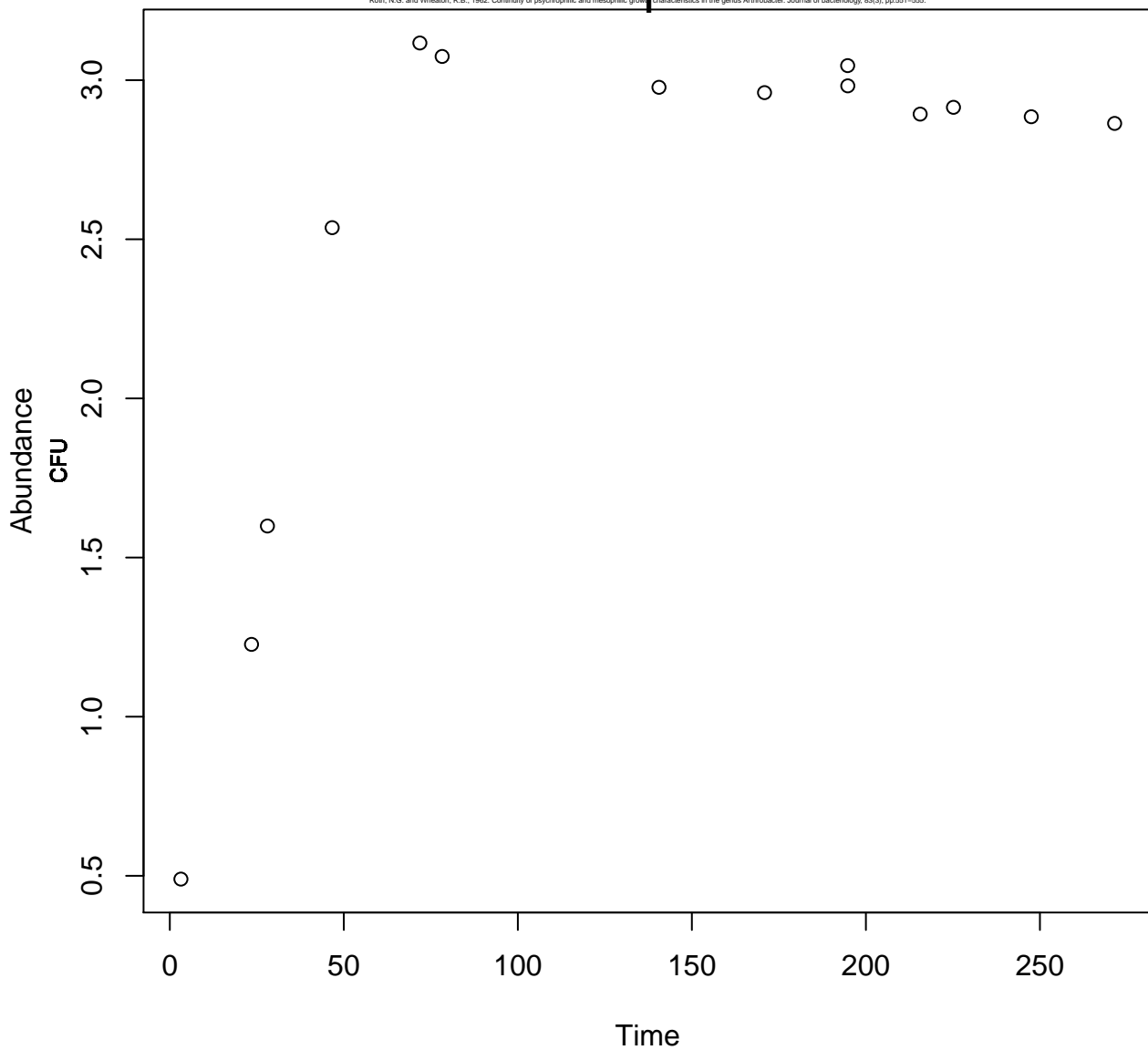
# Arthrobacter sp. 88

TGE agar

20

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



# Arthrobacter sp. 88

TGE agar

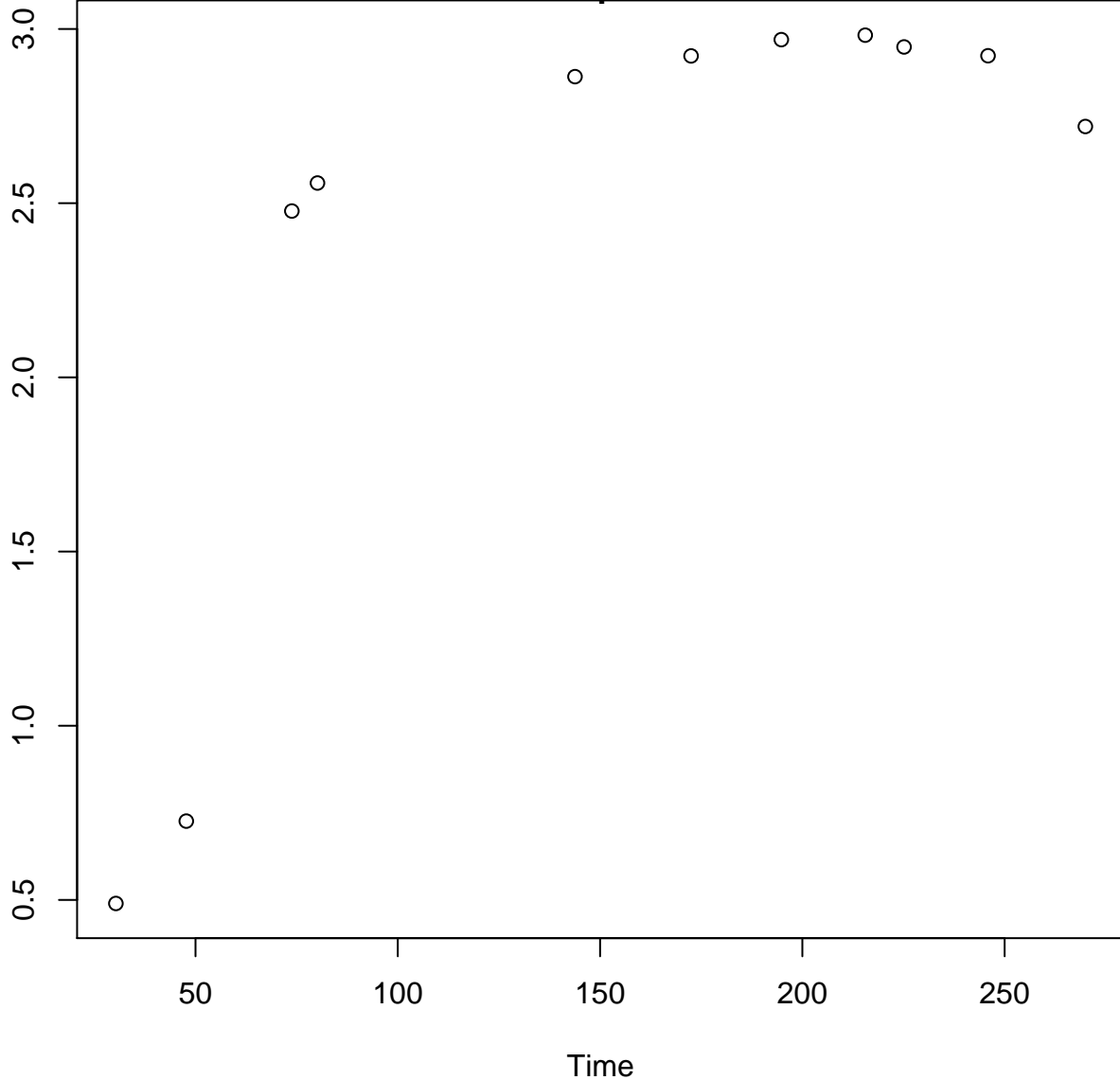
30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU





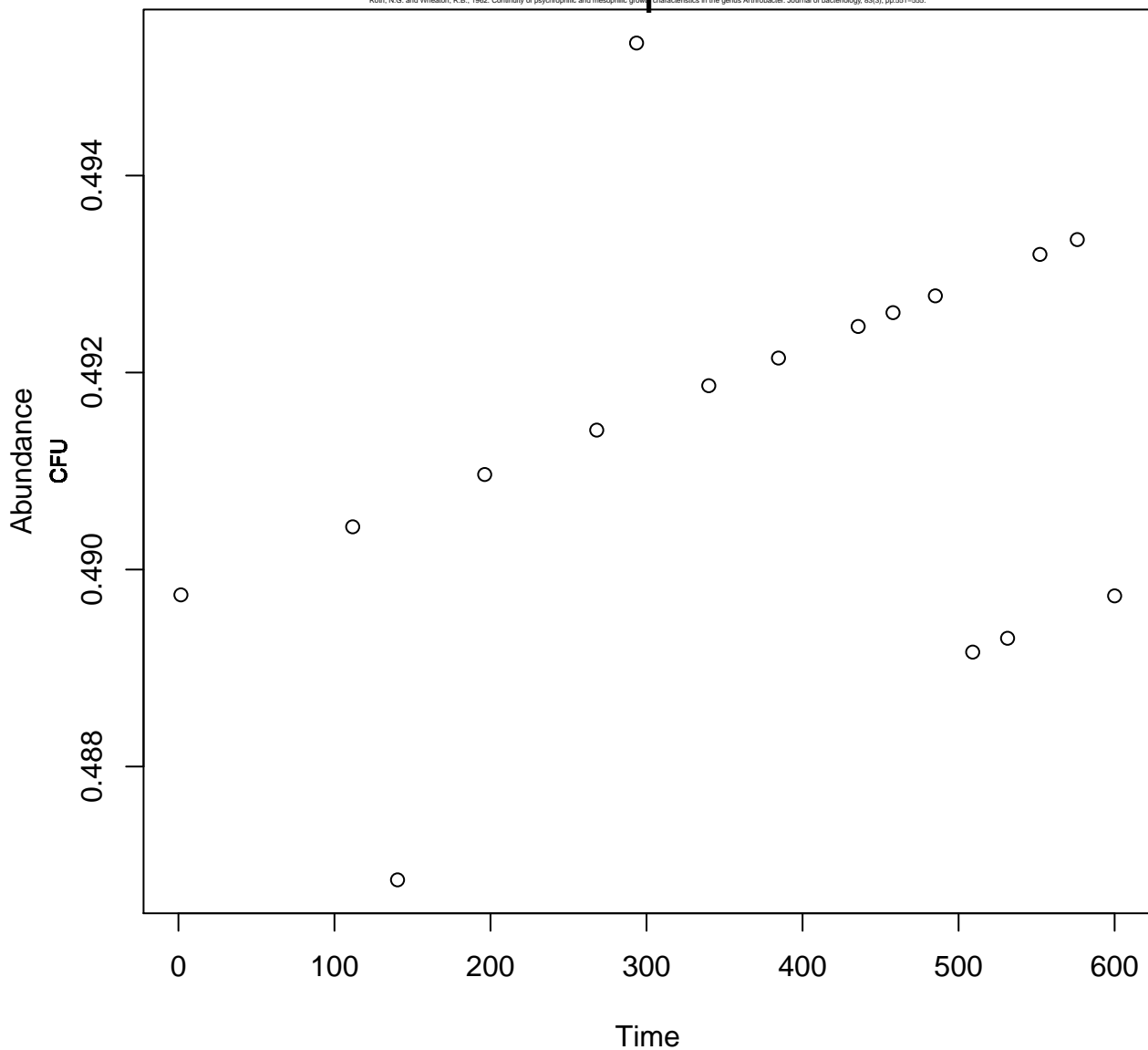
**Arthrobacter sp. 88**

**TGE agar**

**37**

**1**

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



# Arthrobacter sp. 62

TGE agar

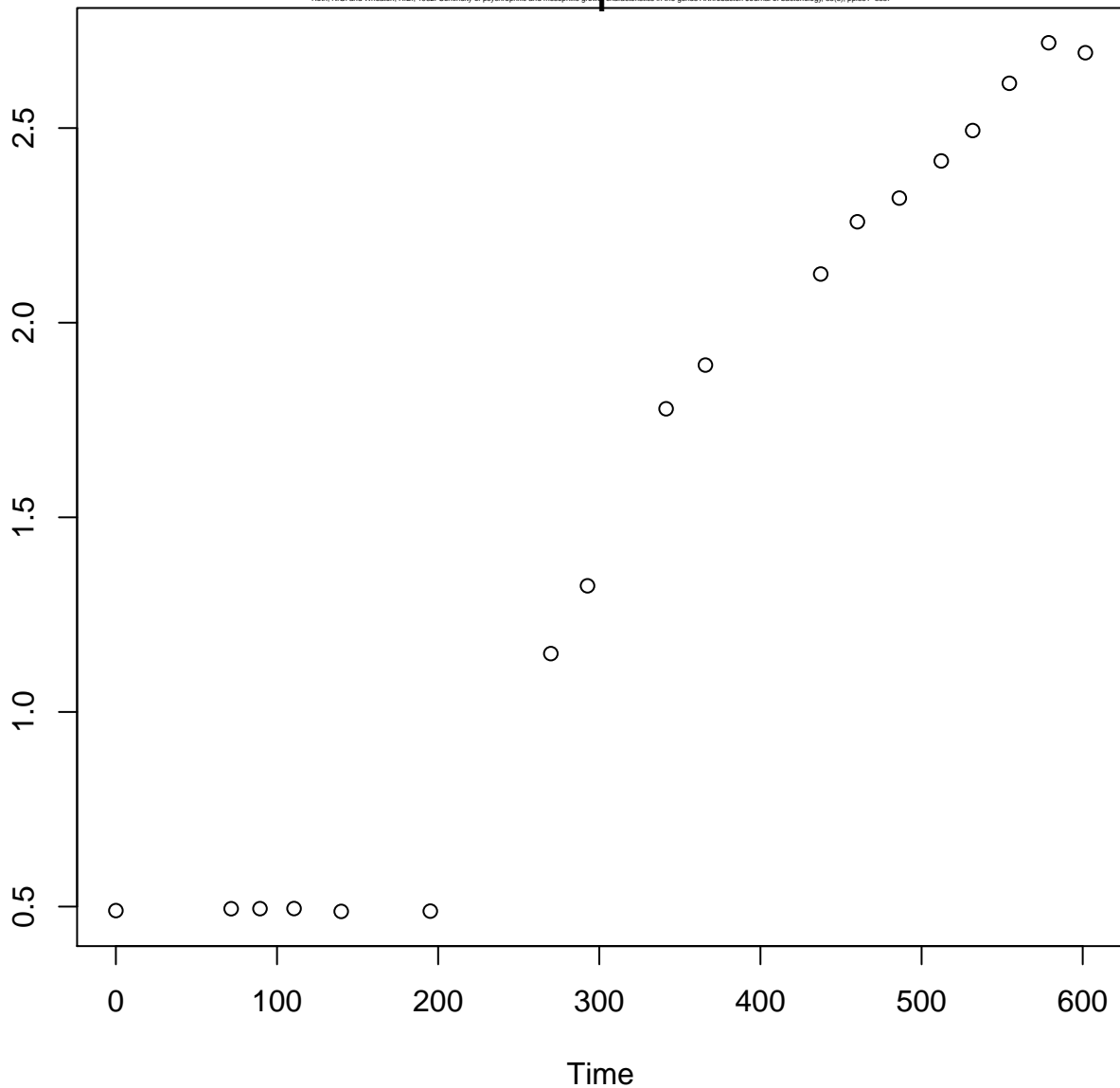
0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU



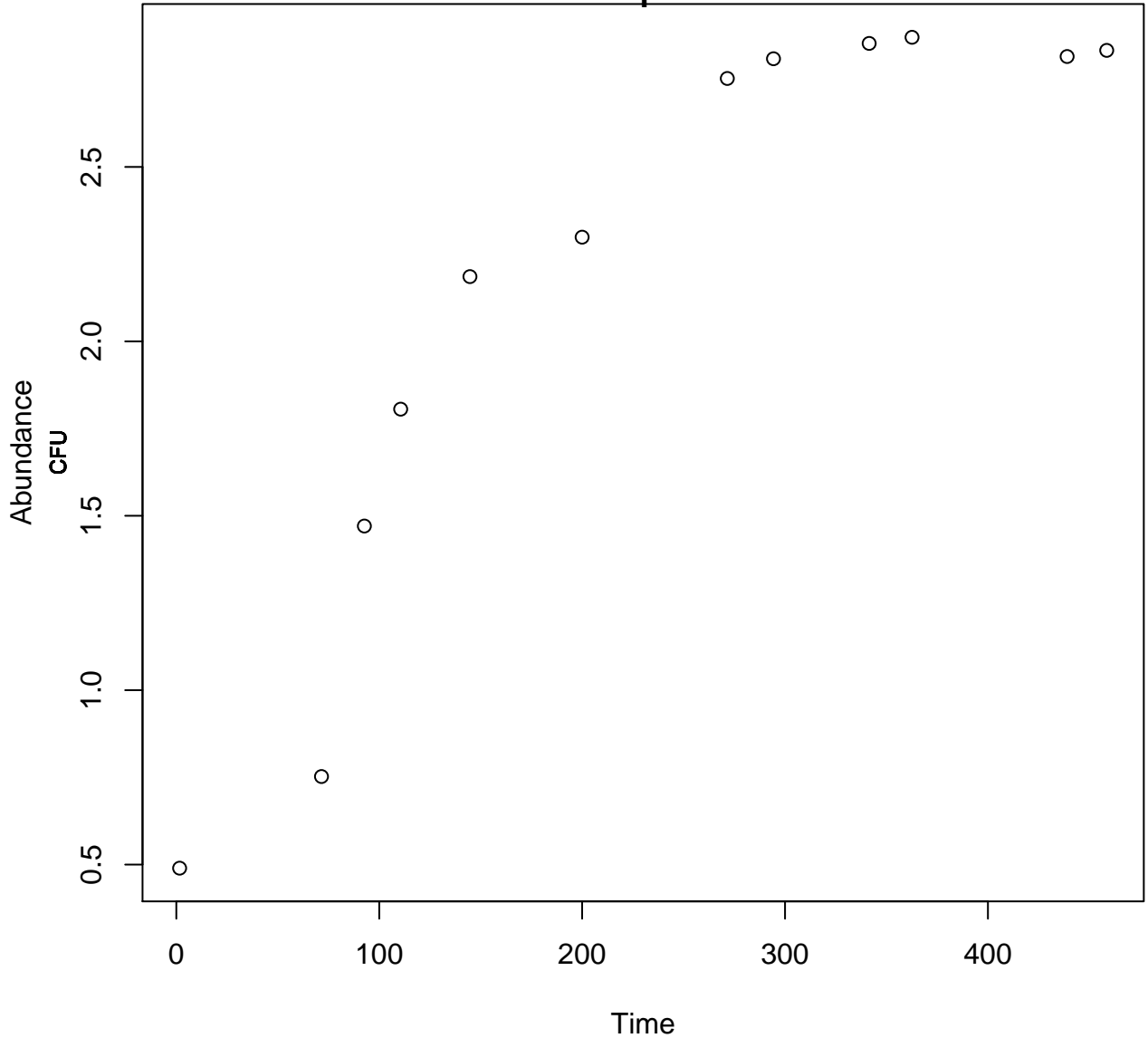
# Arthrobacter sp. 62

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



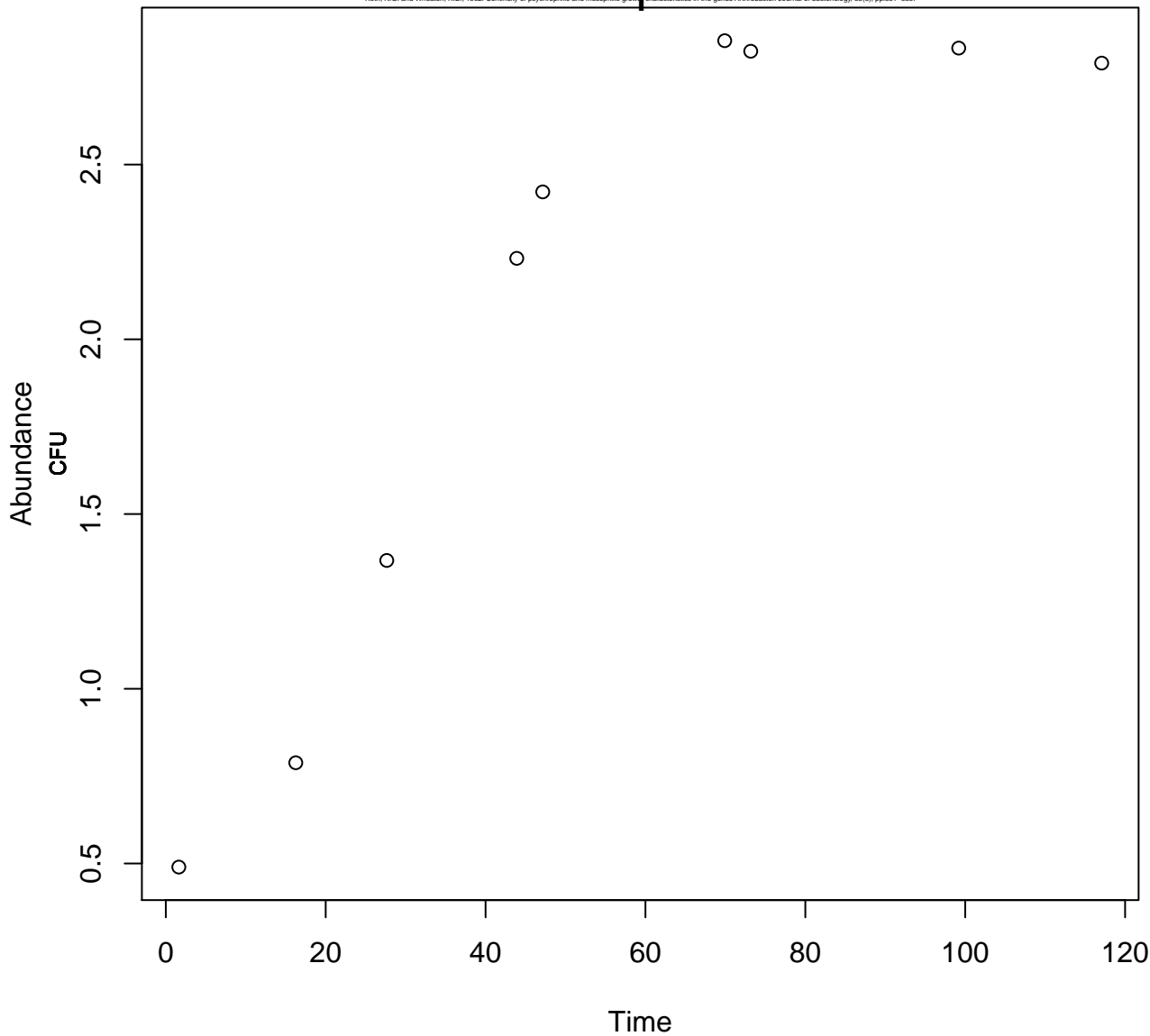
# Arthrobacter sp. 62

TGE agar

20

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



Arthrobacter sp. 62

TGE agar

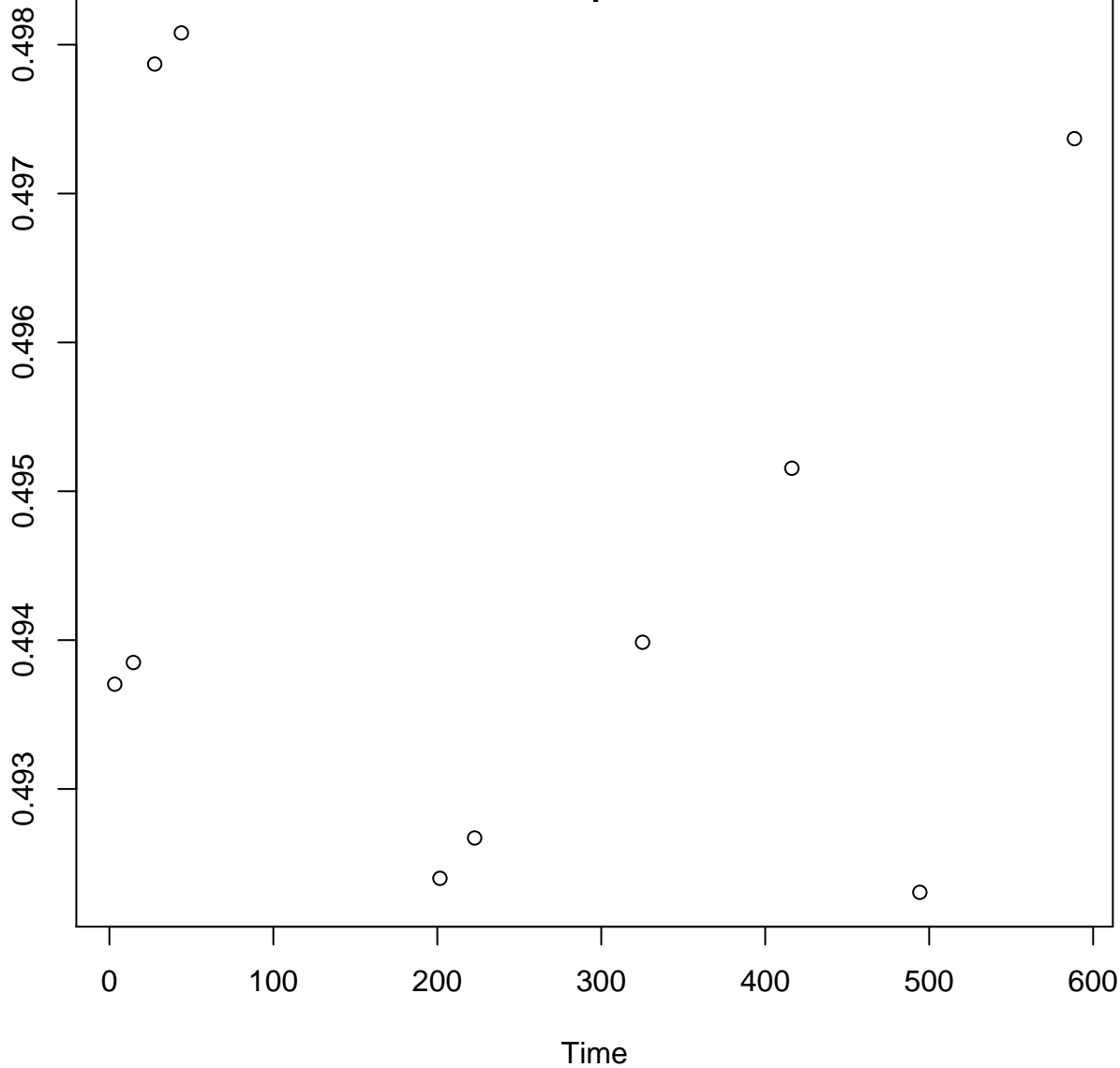
30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU



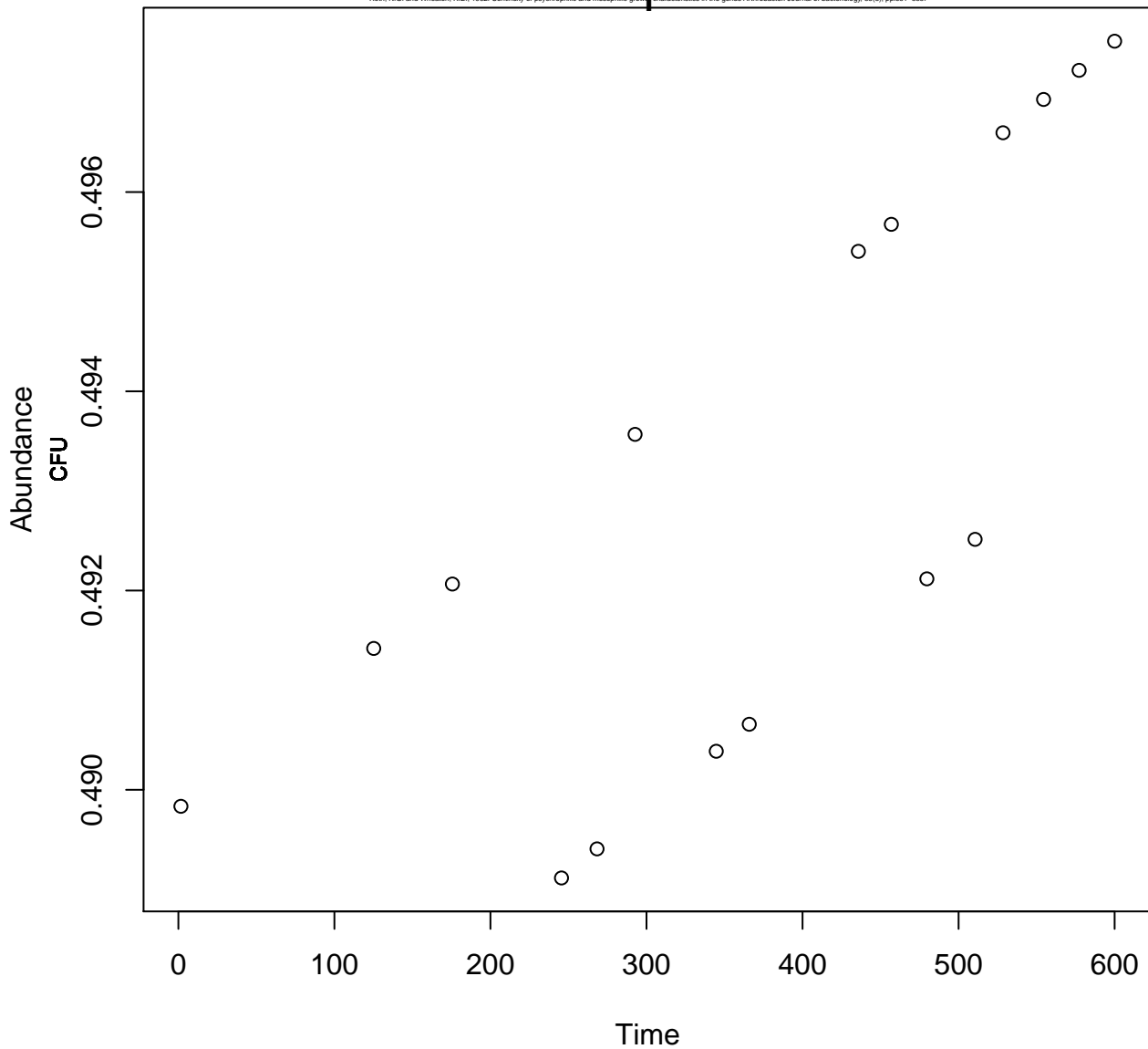
# Arthrobacter sp. 62

TGE agar

37

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



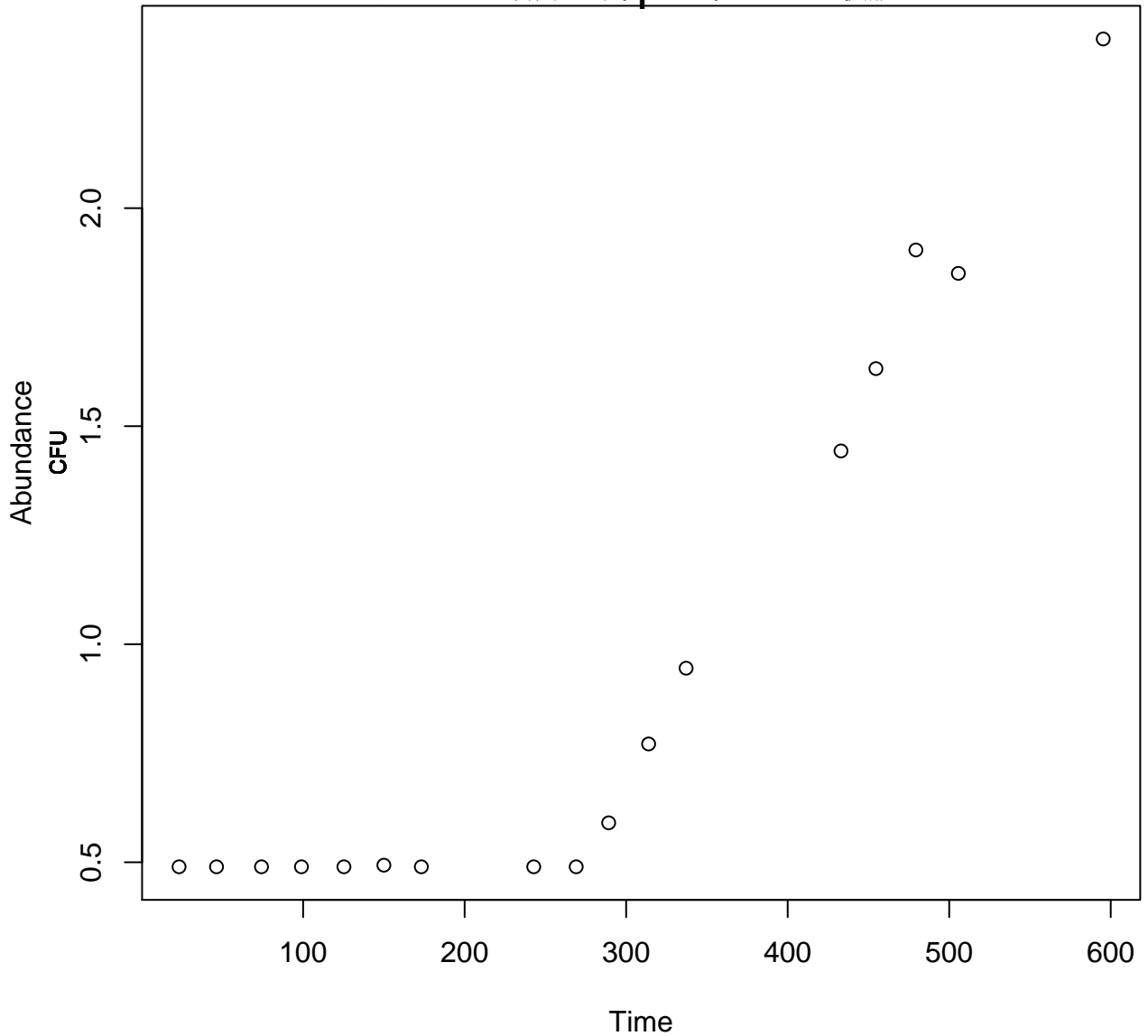
# Arthrobacter aureus

TGE agar

0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



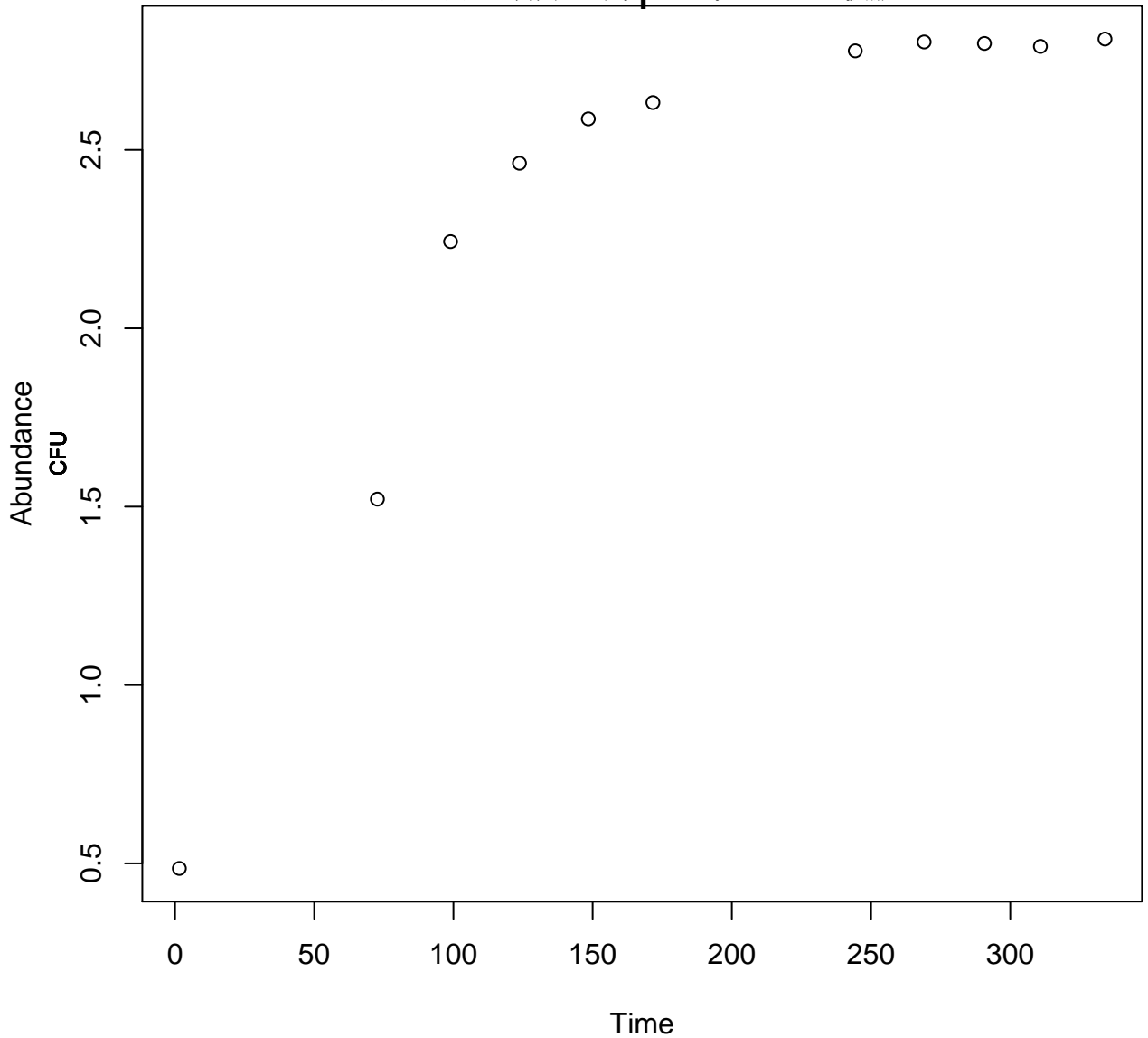
# Arthrobacter aureus

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.





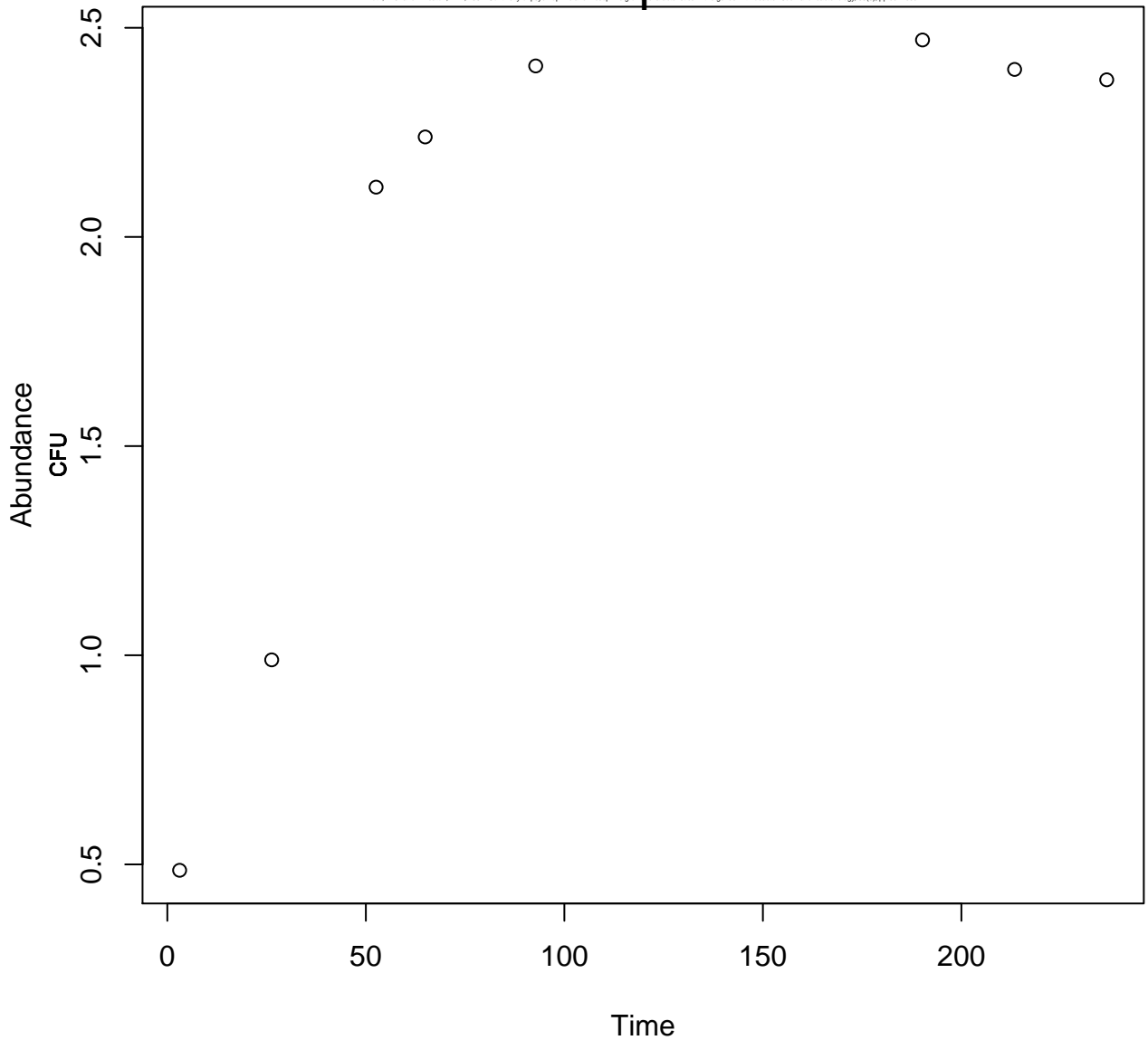
# Arthrobacter aurescens

TGE agar

20

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



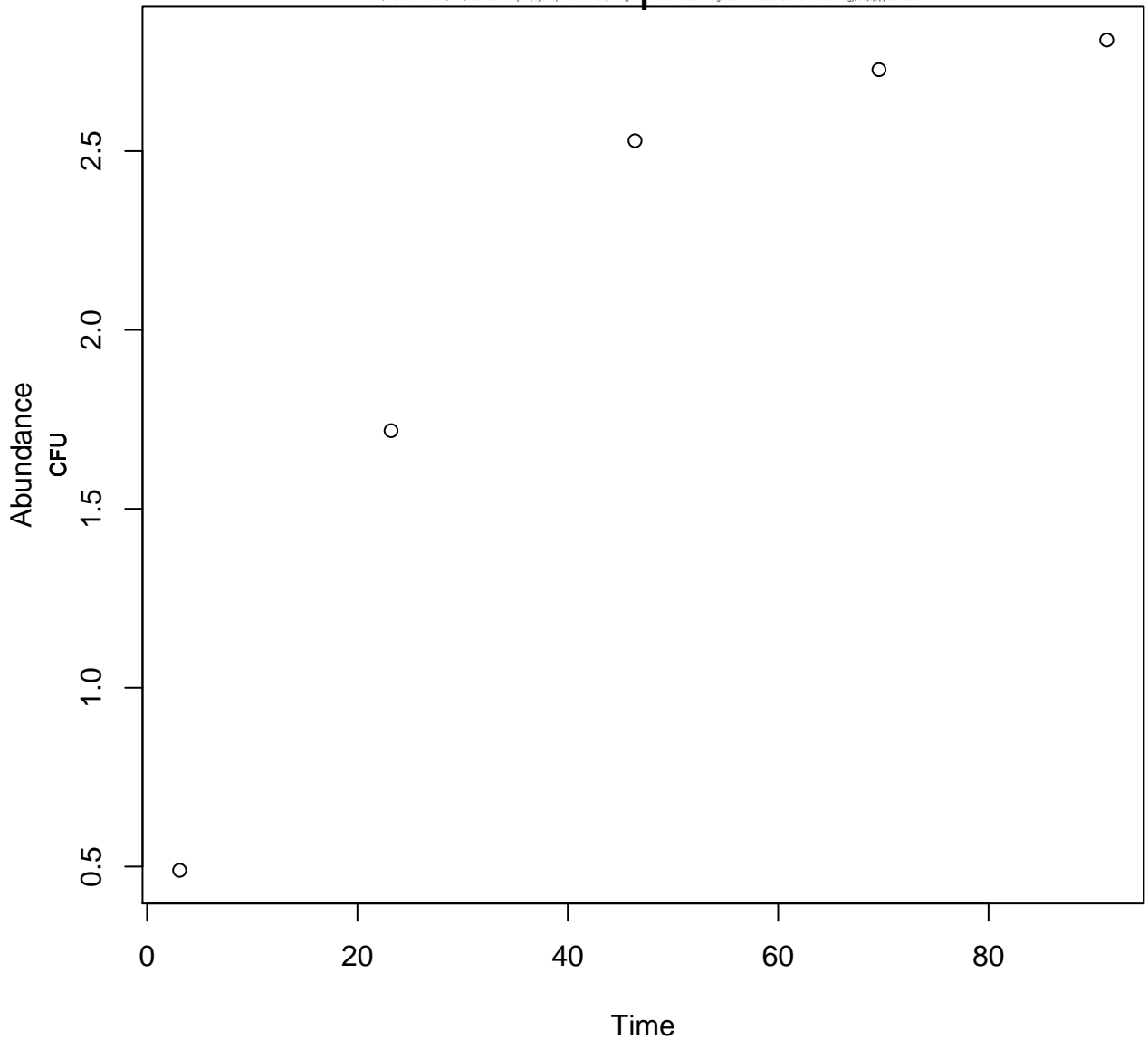
# Arthrobacter aurescens

TGE agar

30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



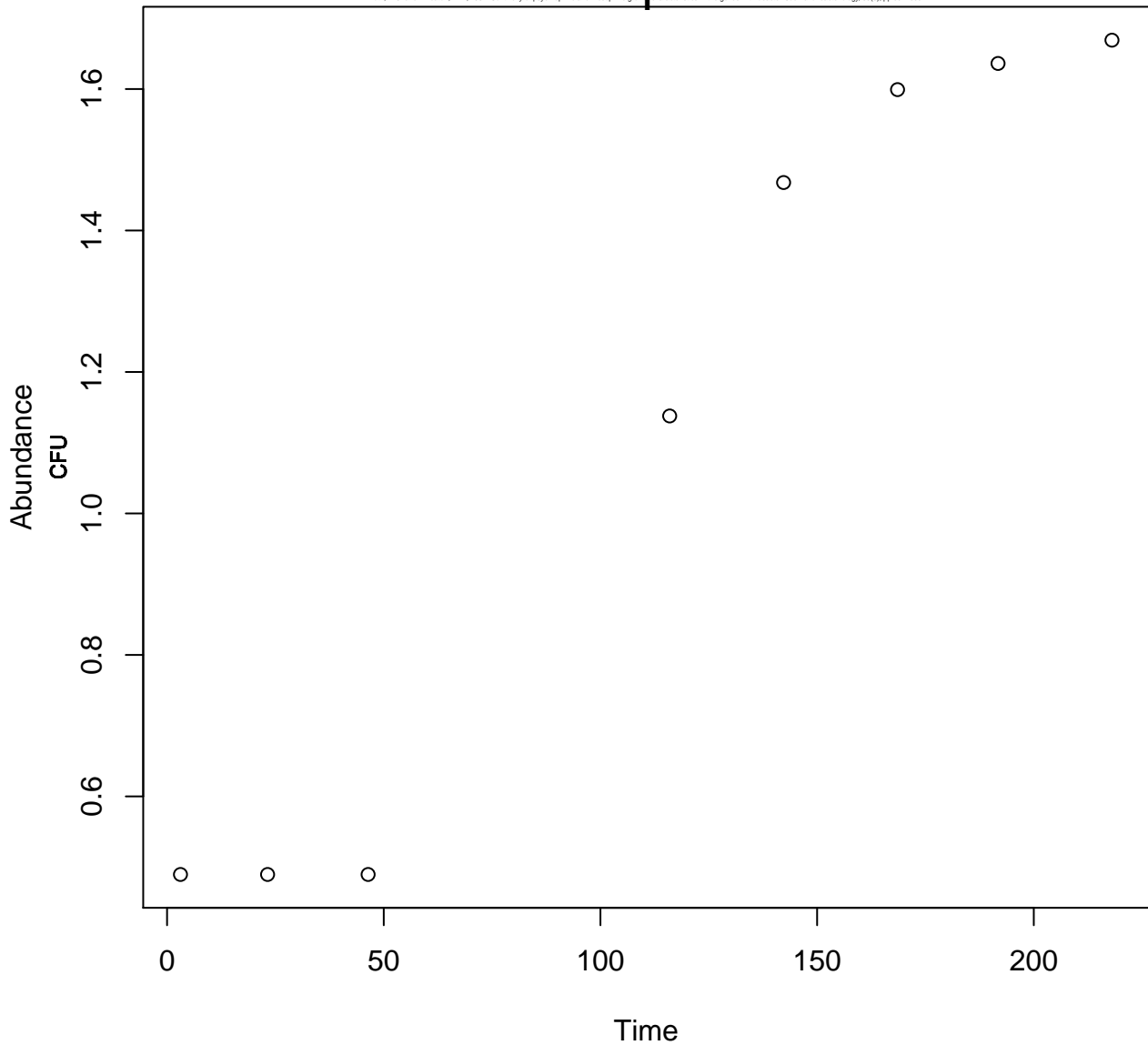
# Arthrobacter aureus

TGE agar

37

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



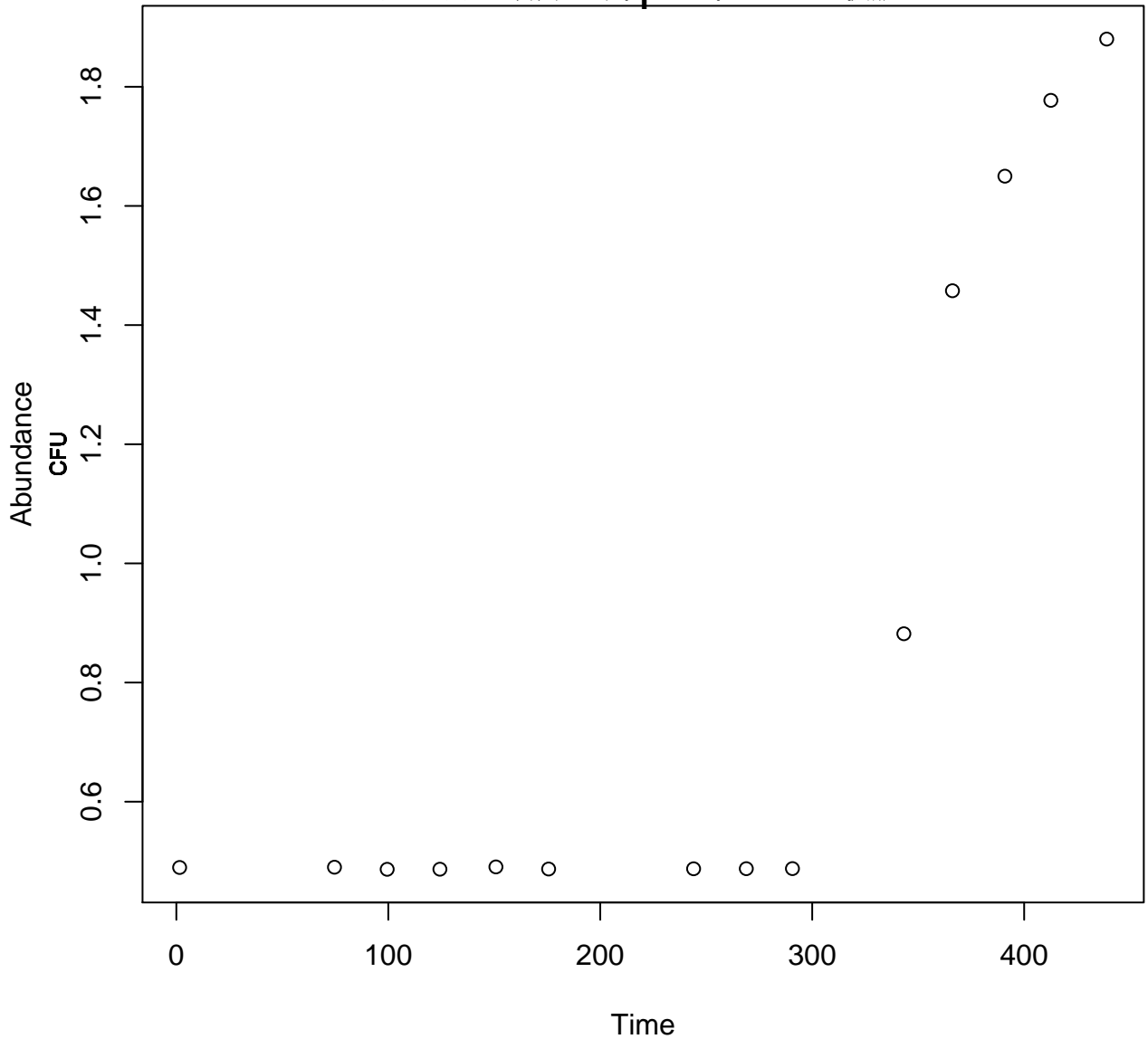
# Arthrobacter citreus

TGE agar

0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



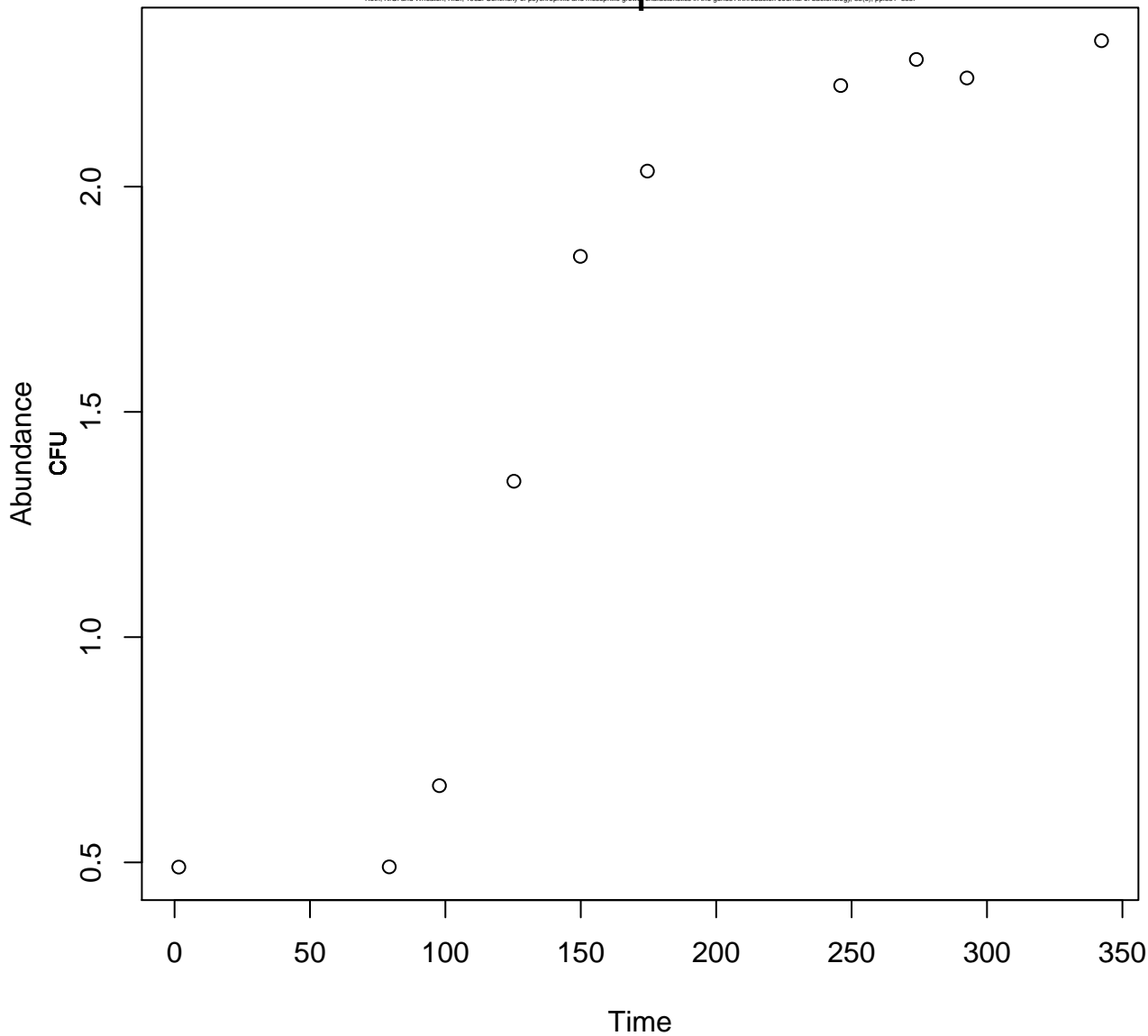
# Arthrobacter citreus

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



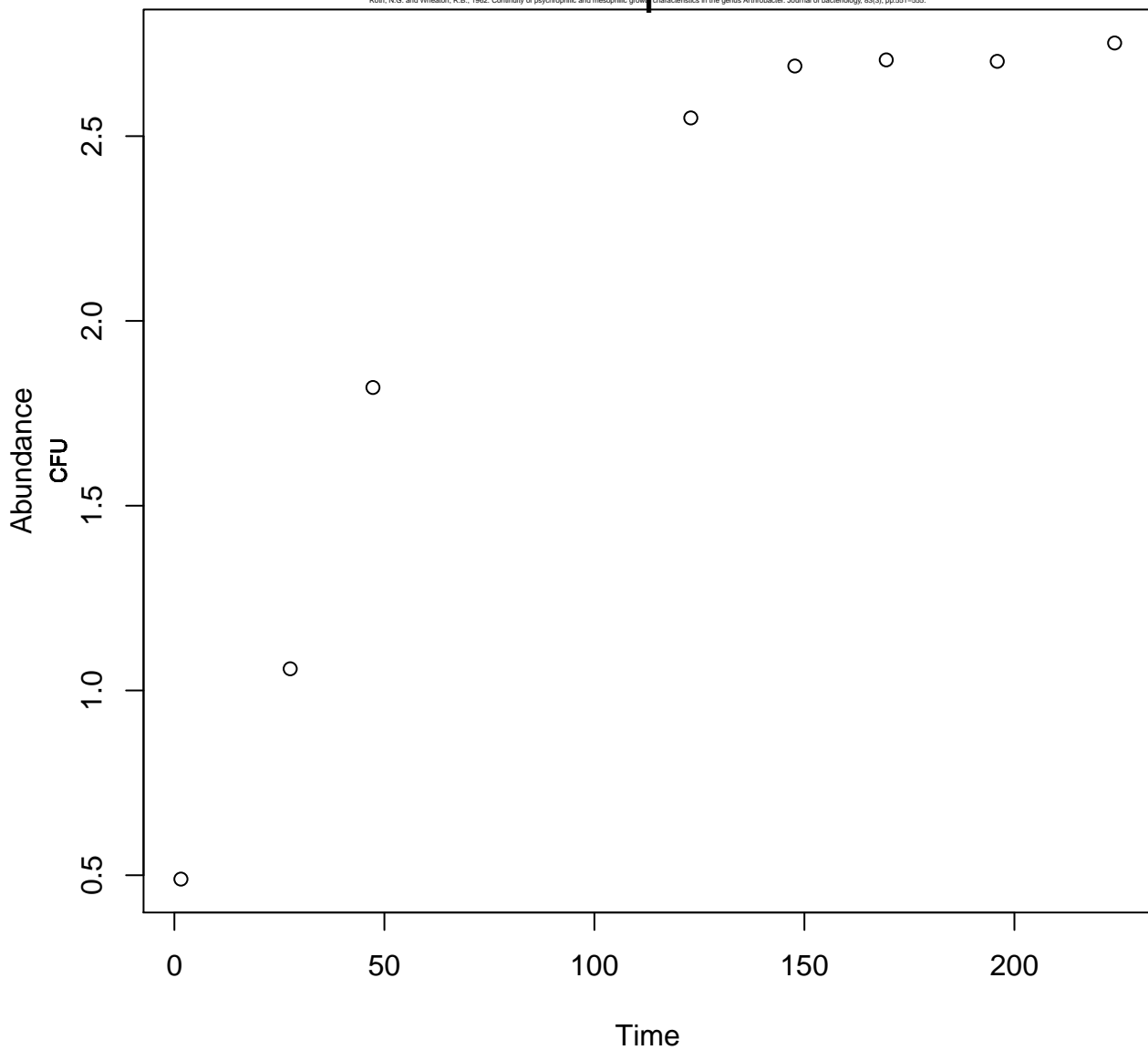
# Arthrobacter citreus

TGE agar

20

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



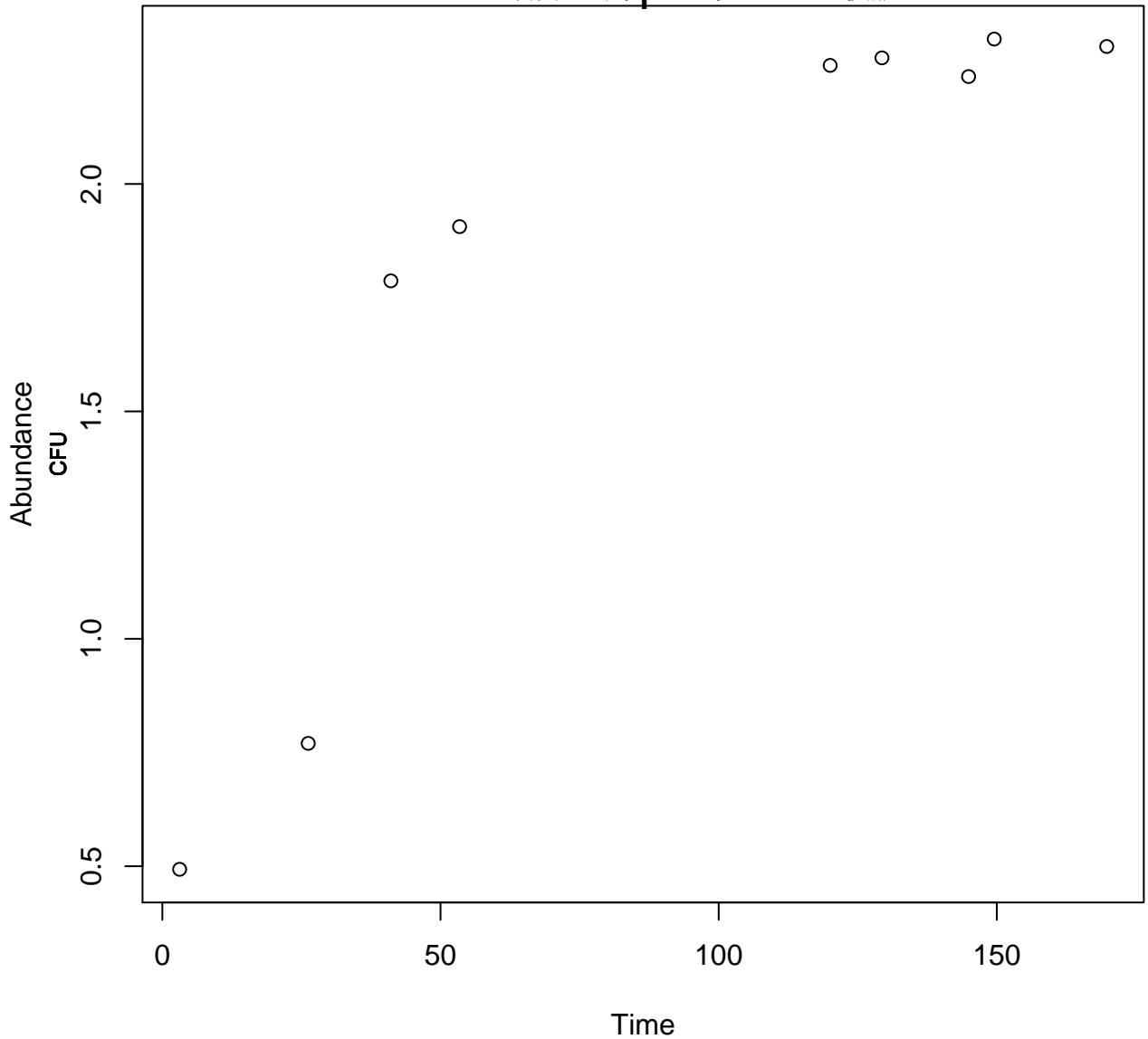
# Arthrobacter citreus

TGE agar

30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



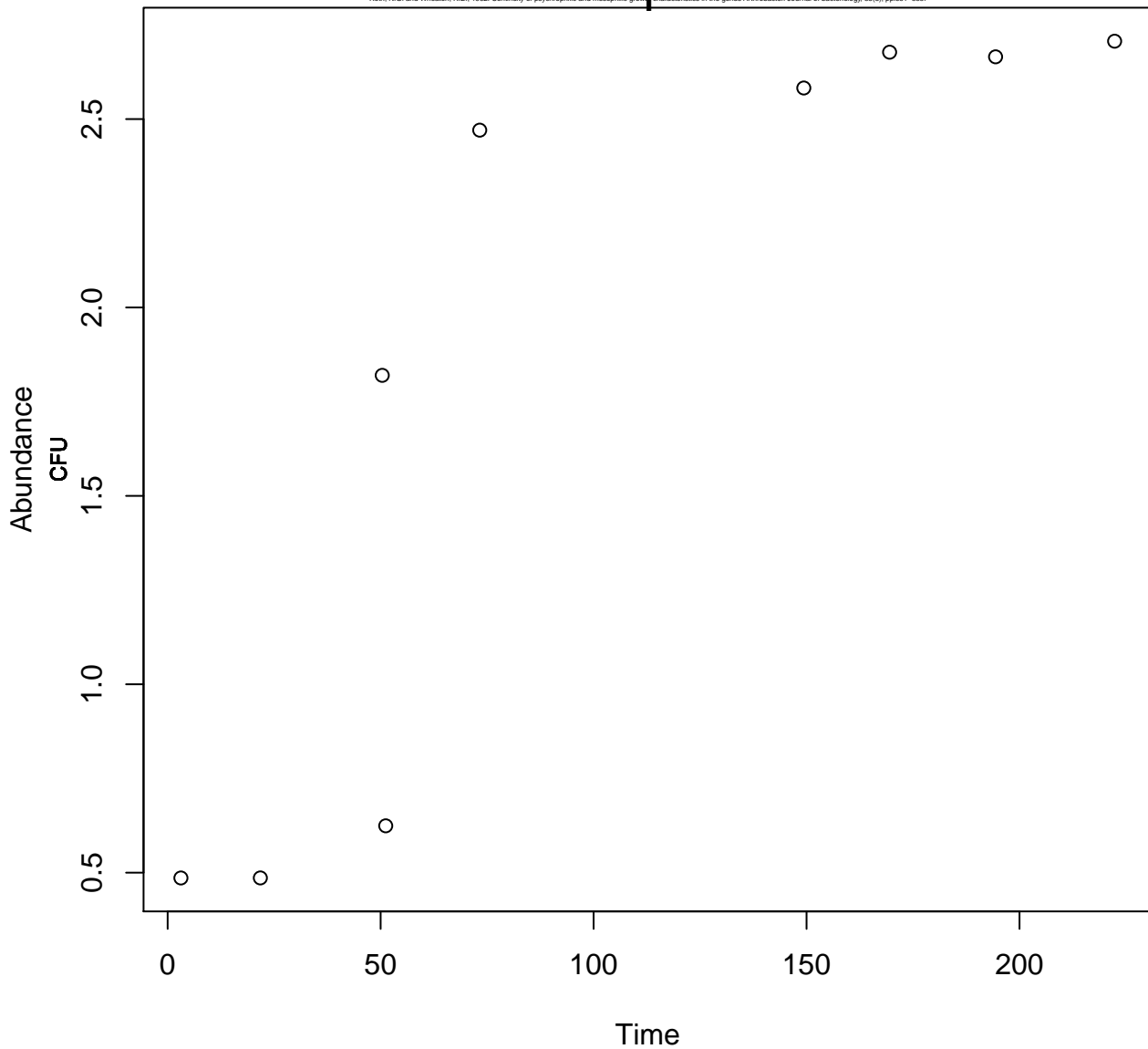
# Arthrobacter citreus

TGE agar

37

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.





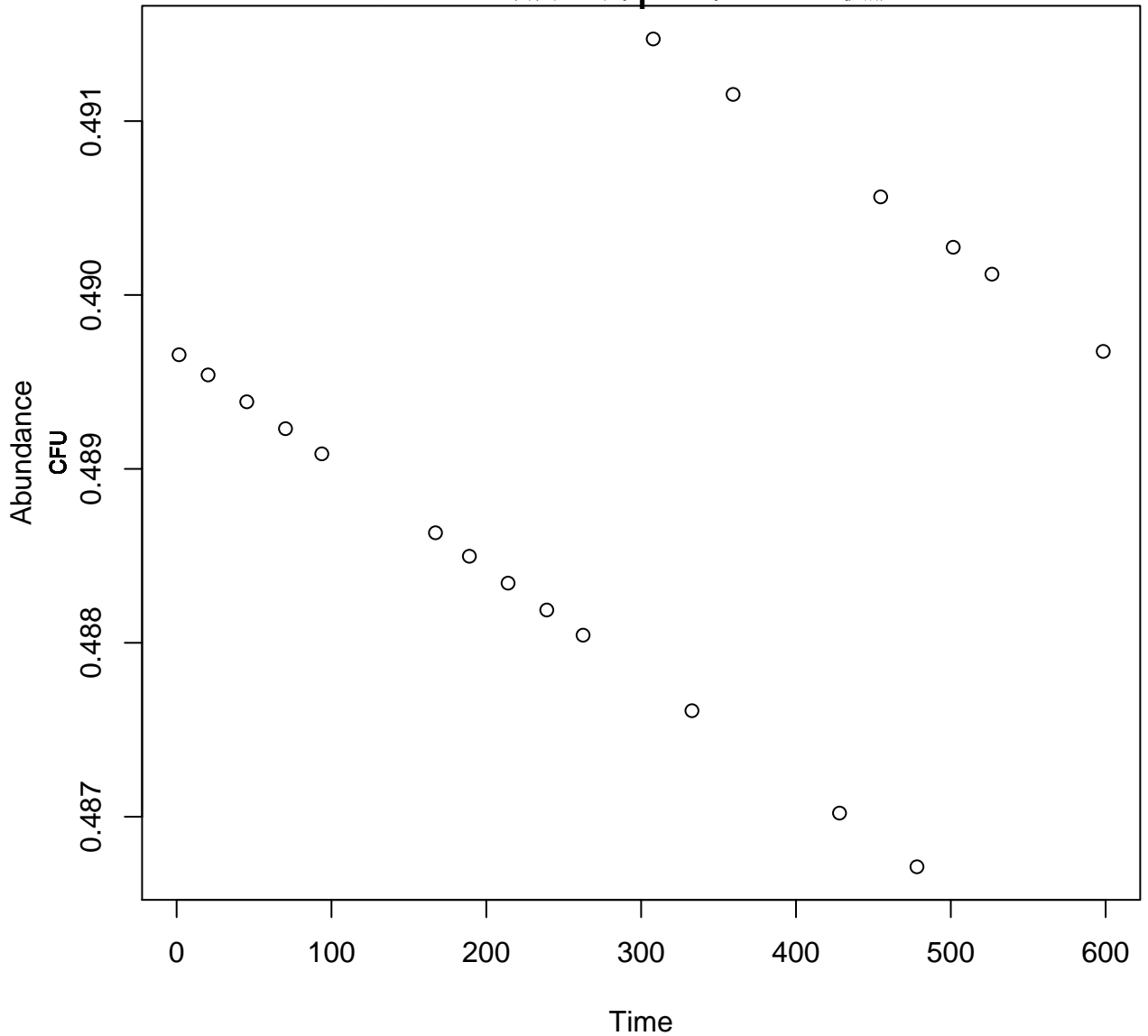
# Arthrobacter globiformis

TGE agar

0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



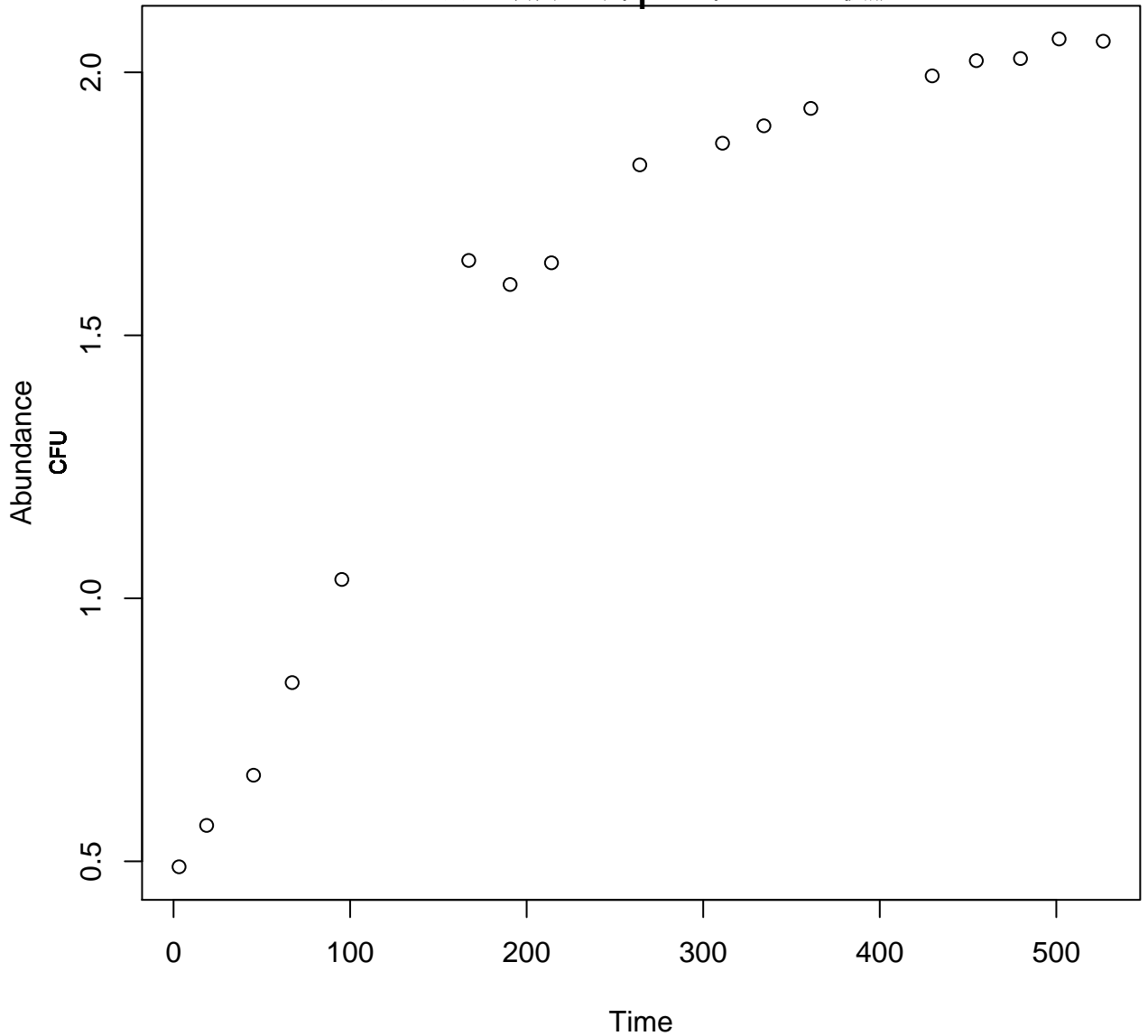
# Arthrobacter globiformis

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



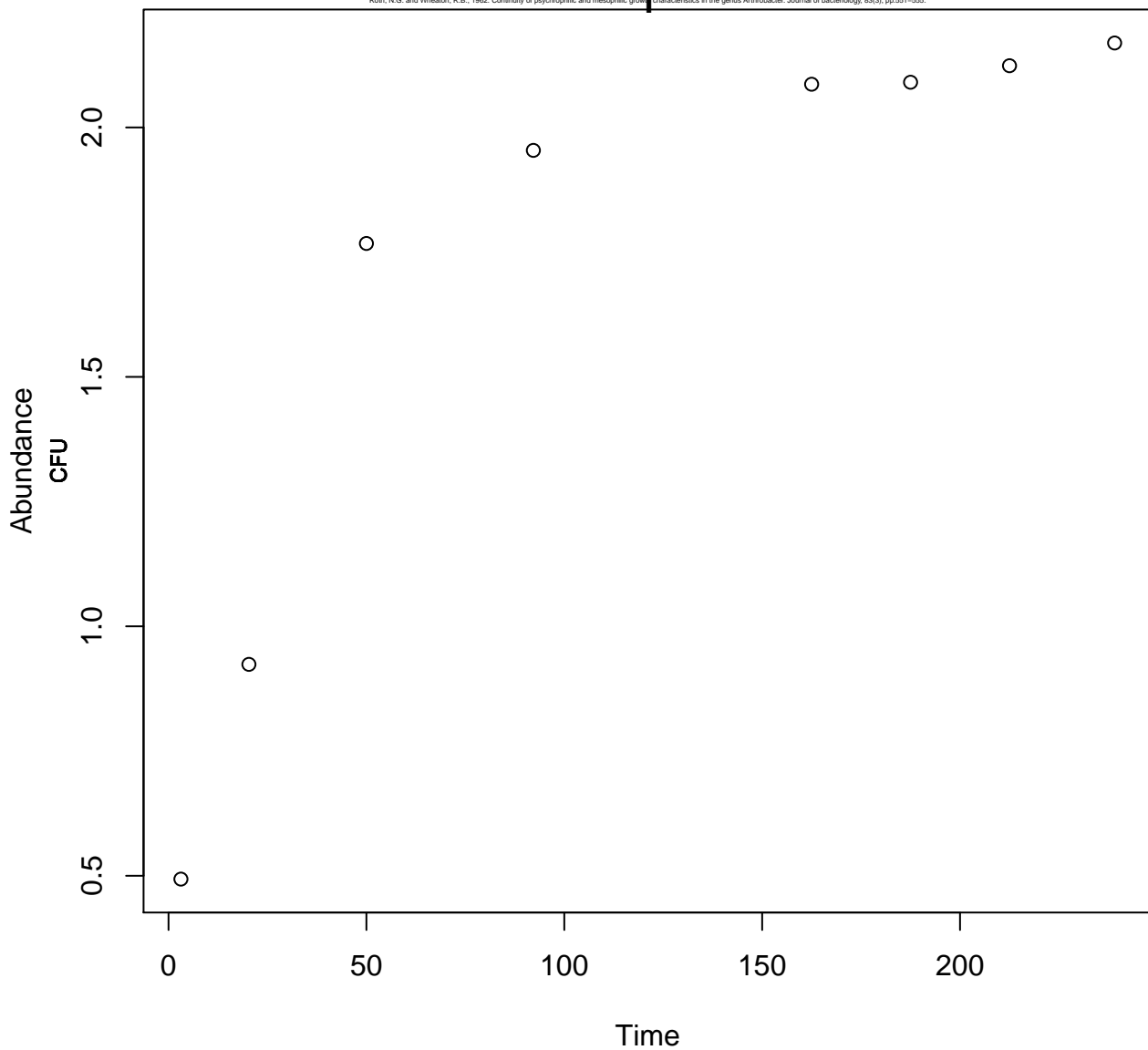
# Arthrobacter globiformis

TGE agar

20

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



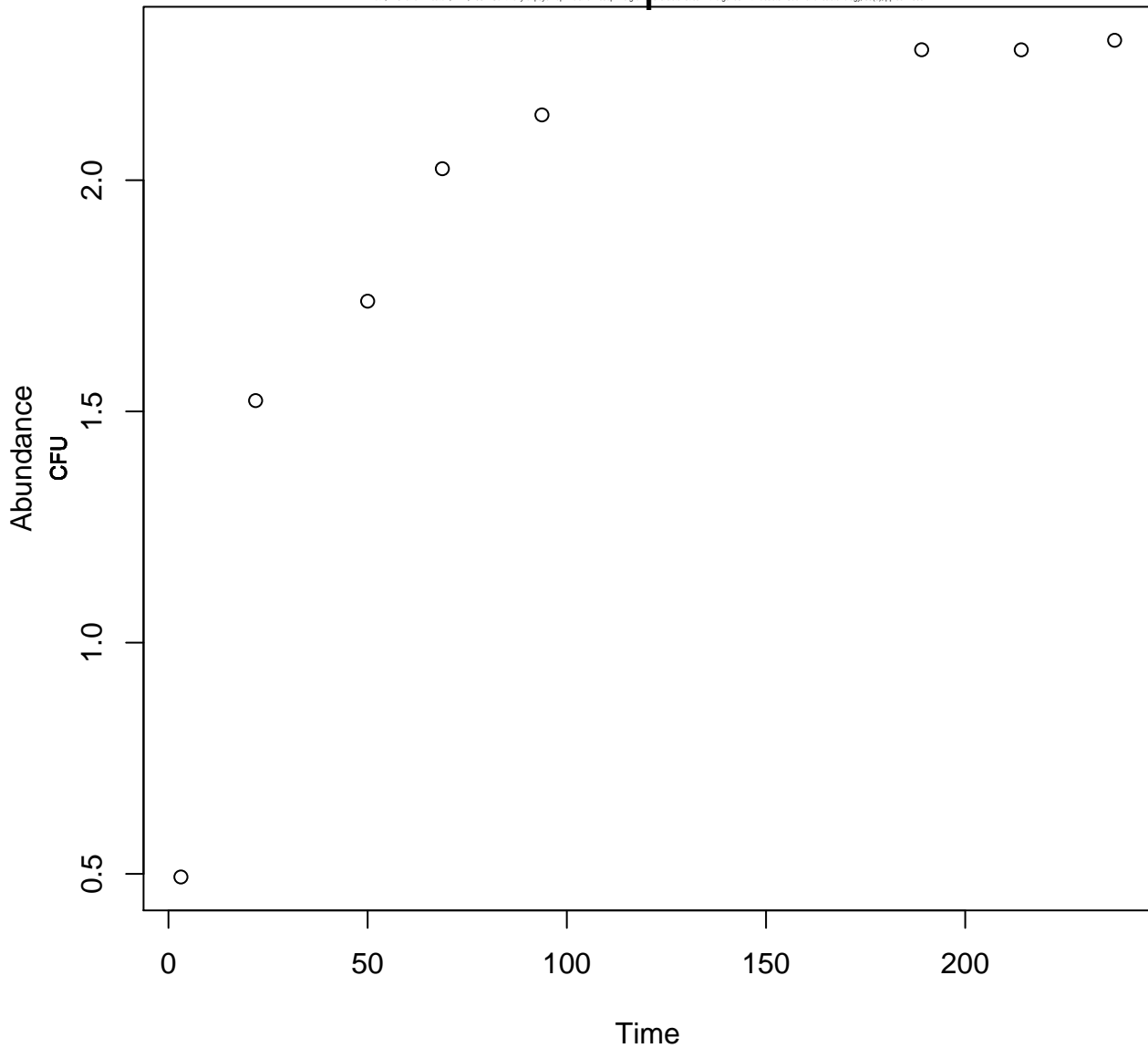
# Arthrobacter globiformis

TGE agar

30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



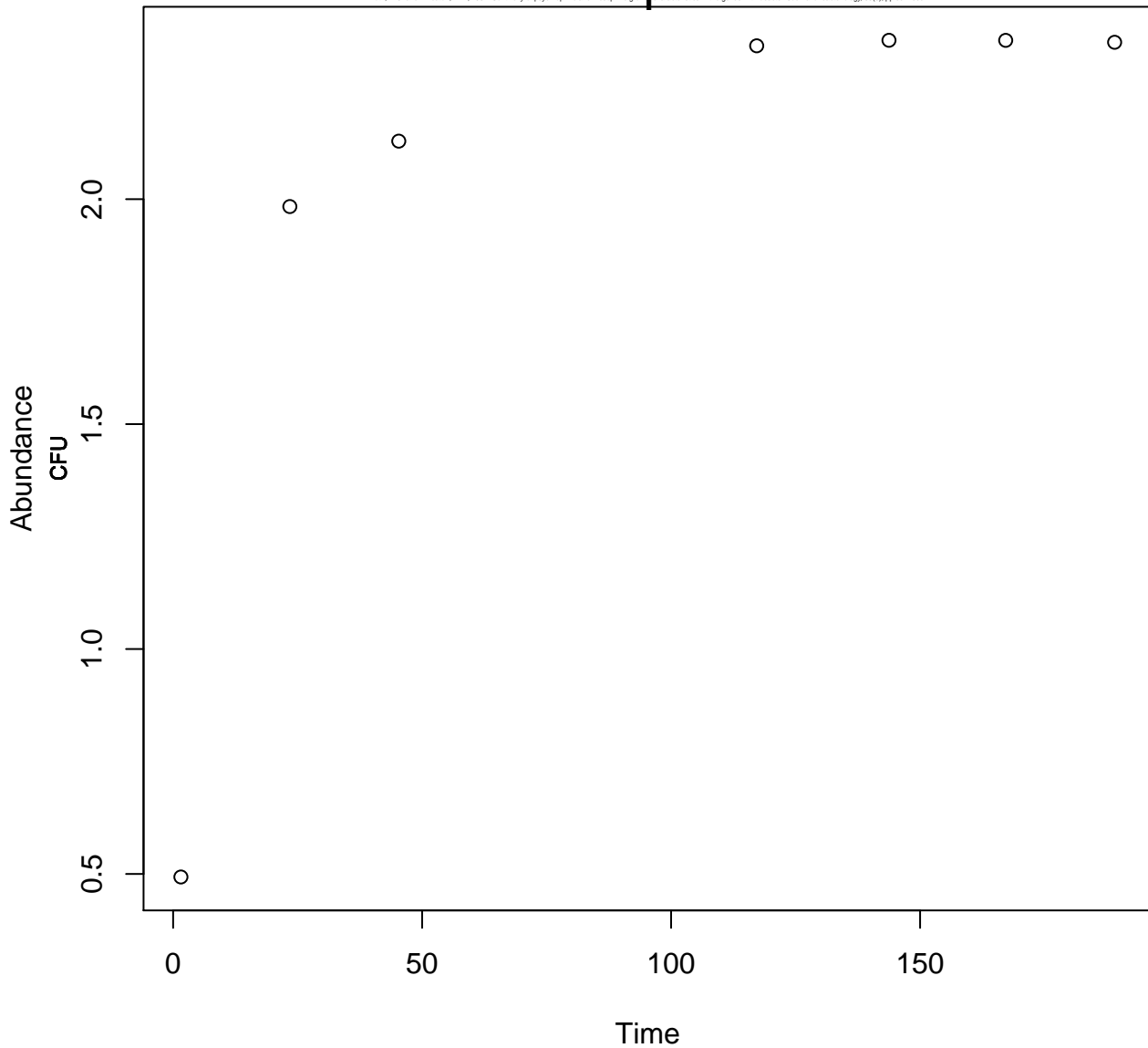
# Arthrobacter globiformis

TGE agar

37

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



# Arthrobacter simplex

TGE agar

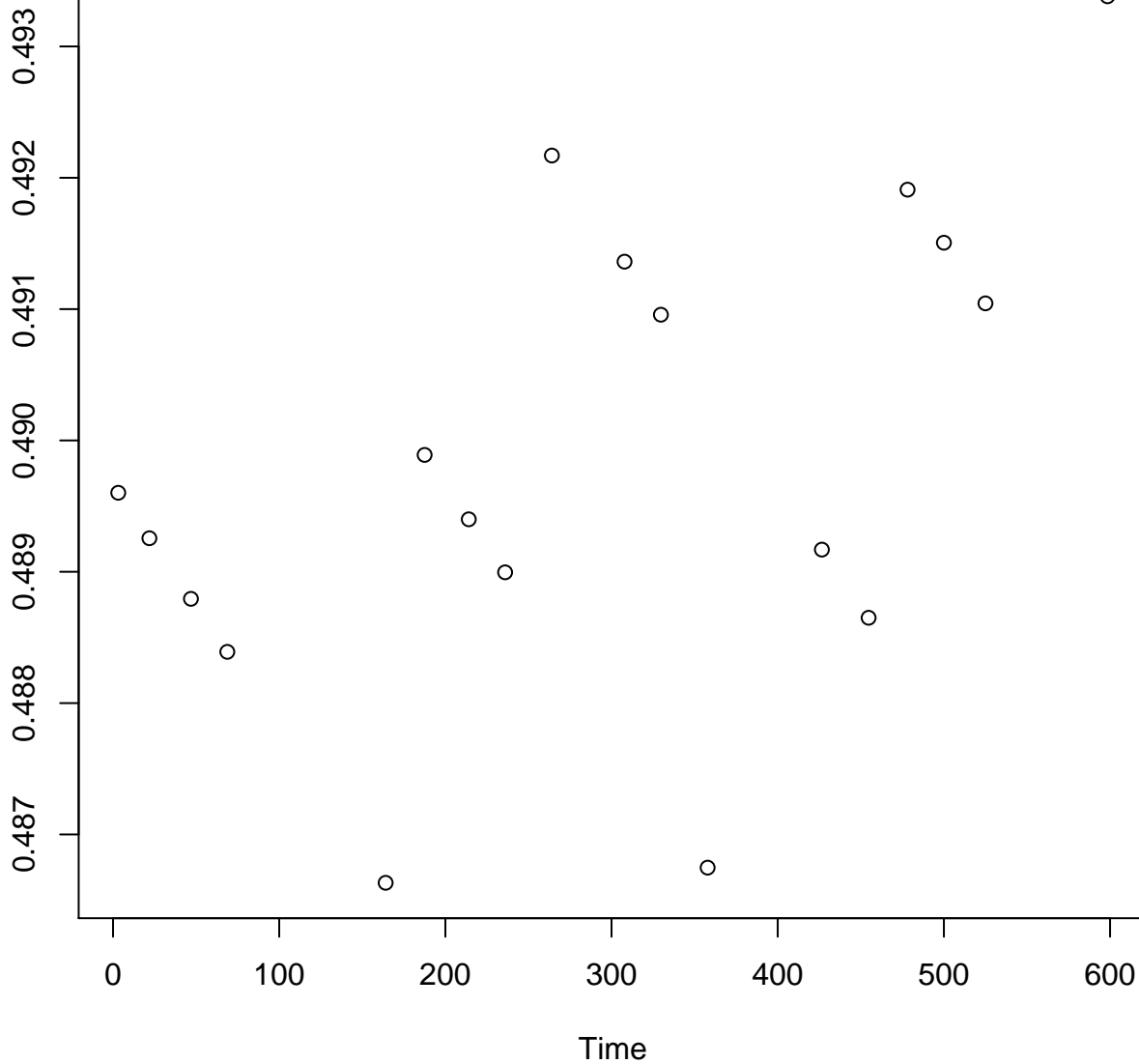
0

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU



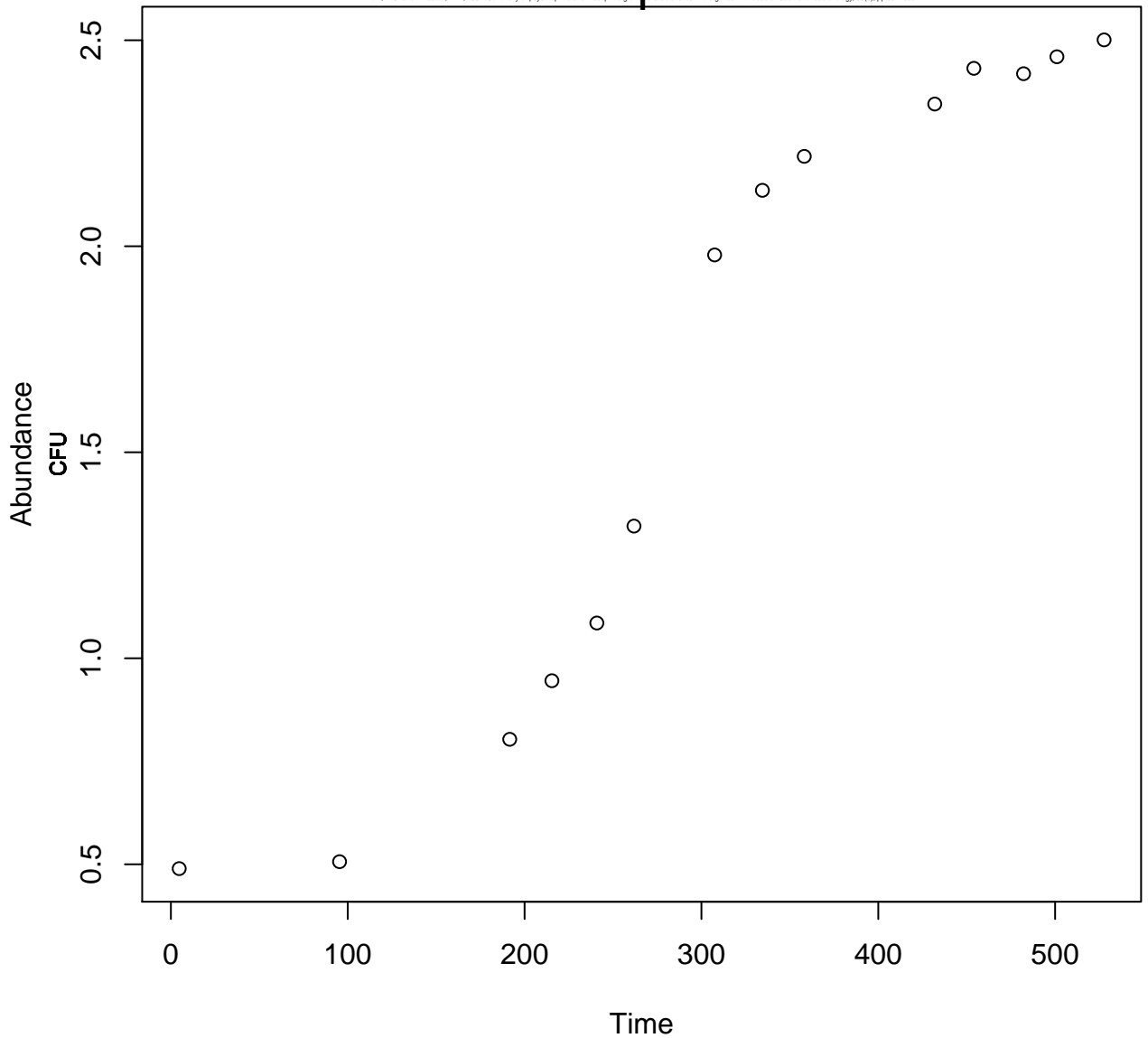
# Arthrobacter simplex

TGE agar

7

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.



# Arthrobacter simplex

TGE agar

20

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU

2.5  
2.0  
1.5  
1.0  
0.5

0

50

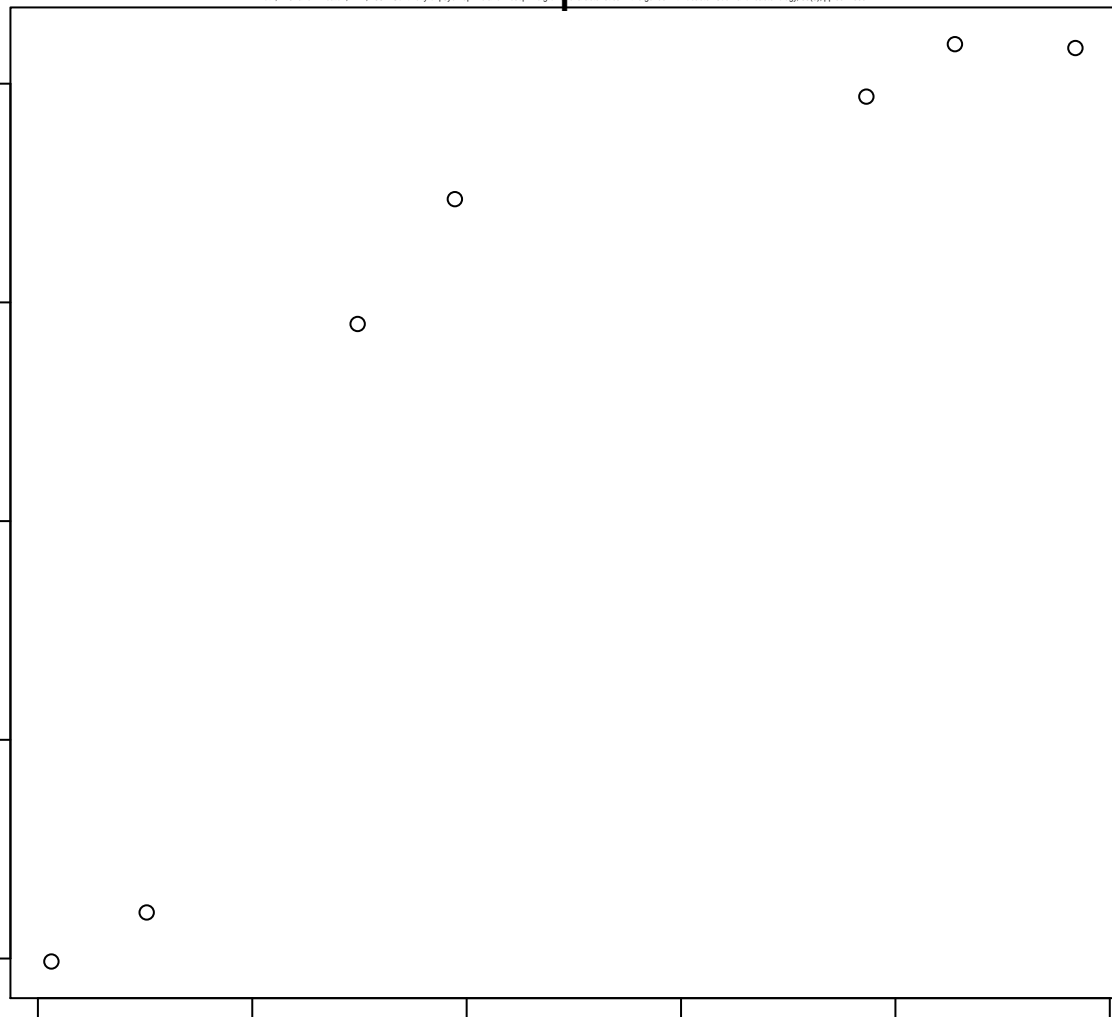
100

150

200

250

Time





# Arthrobacter simplex

TGE agar

30

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU

0.5  
1.0  
1.5  
2.0  
2.5

0

50

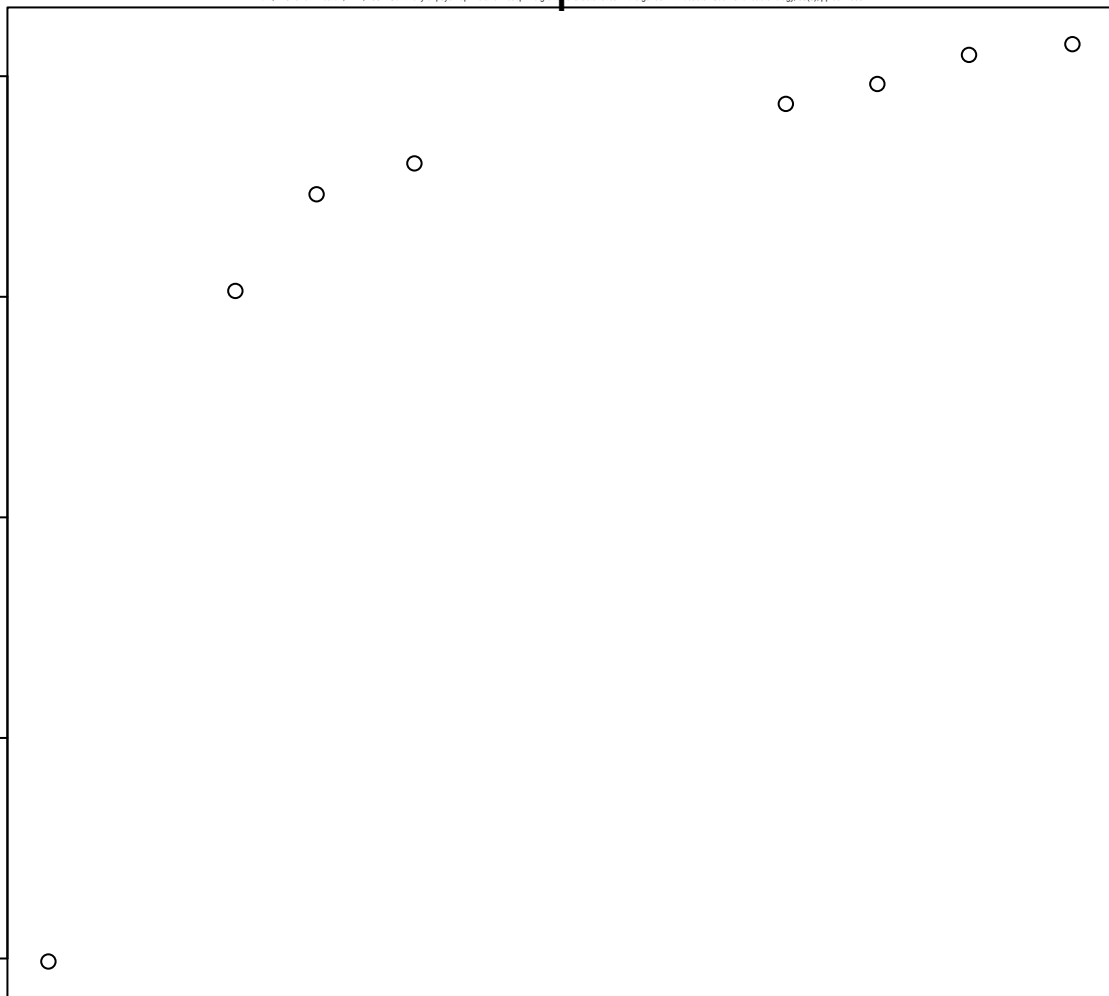
100

150

200

250

Time



# Arthrobacter simplex

TGE agar

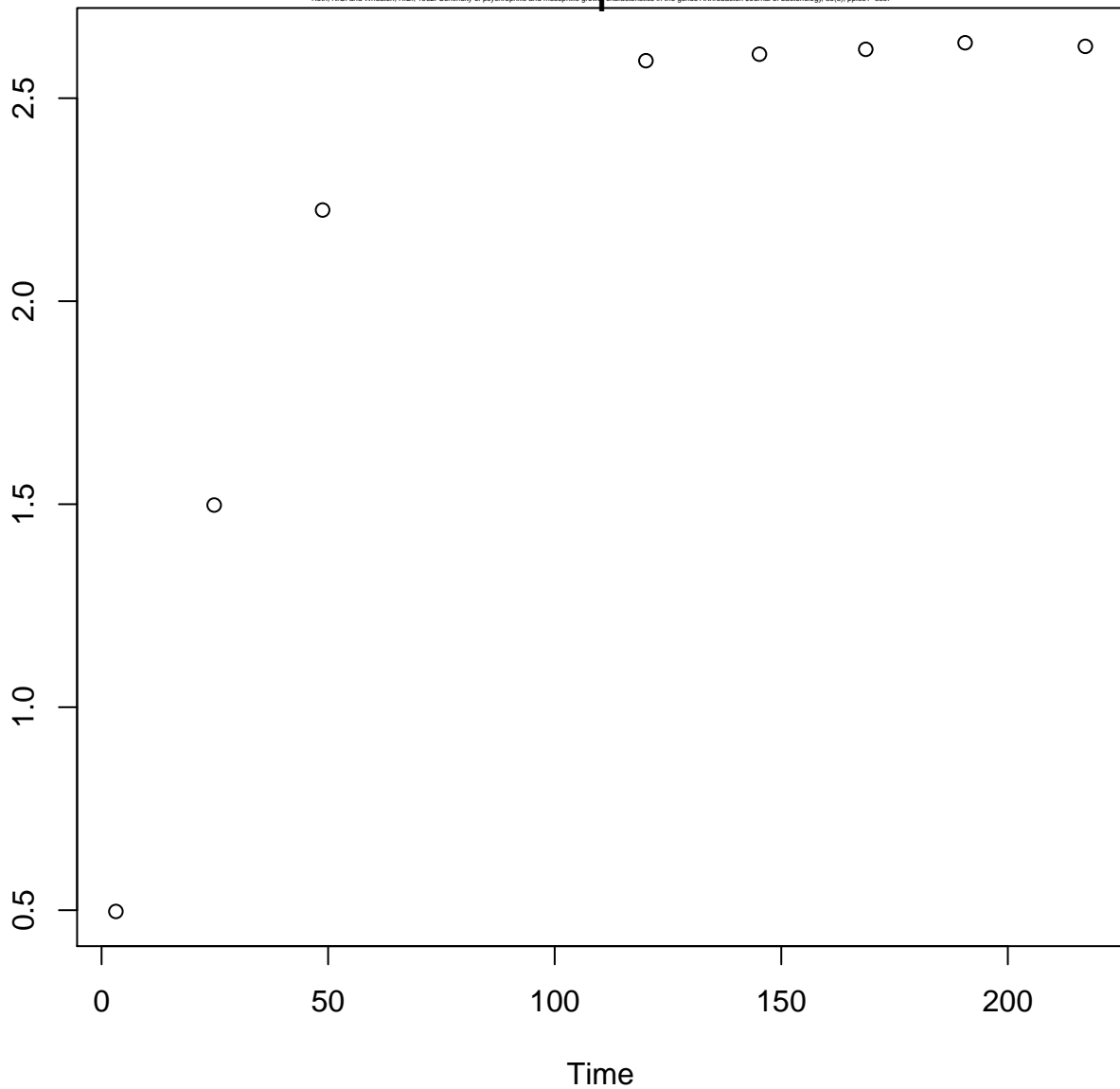
37

1

Roth, N.G. and Wheaton, R.B., 1962. Continuity of psychrophilic and mesophilic growth characteristics in the genus *Arthrobacter*. *Journal of bacteriology*, 83(3), pp.551-555.

Abundance

CFU



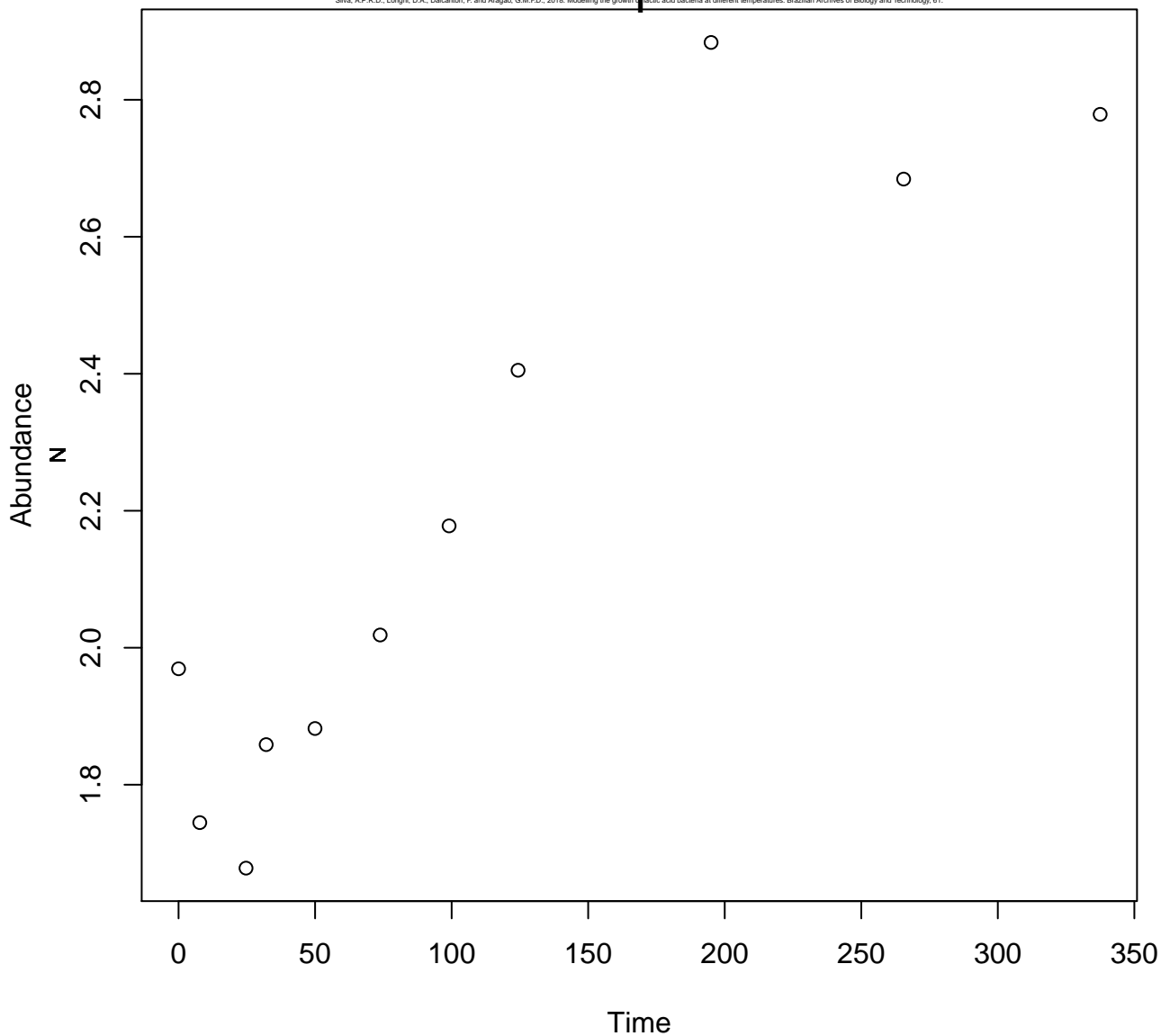
# Lactobacillus plantarum

MRS broth

8

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



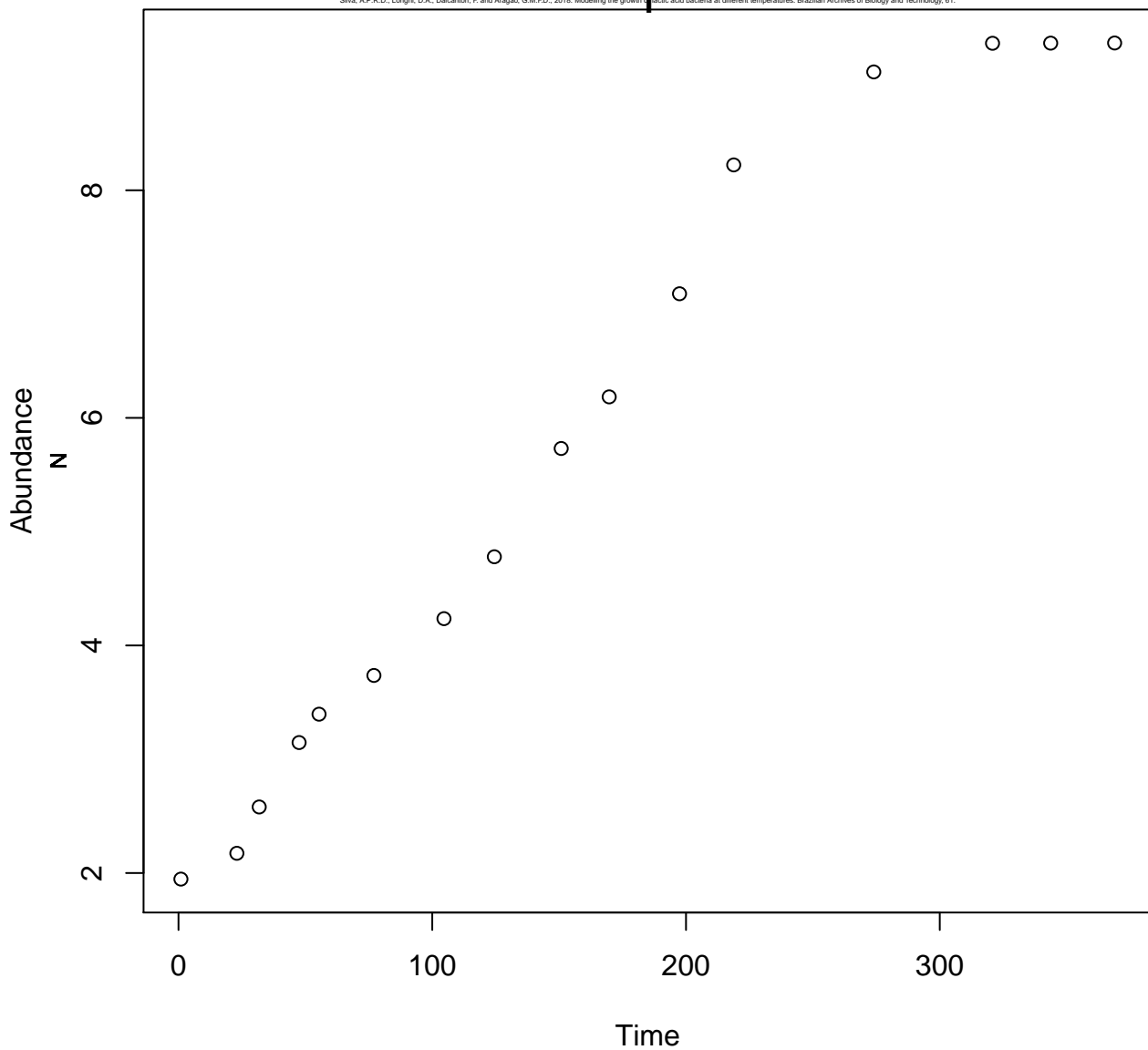
# Lactobacillus plantarum

MRS broth

12

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



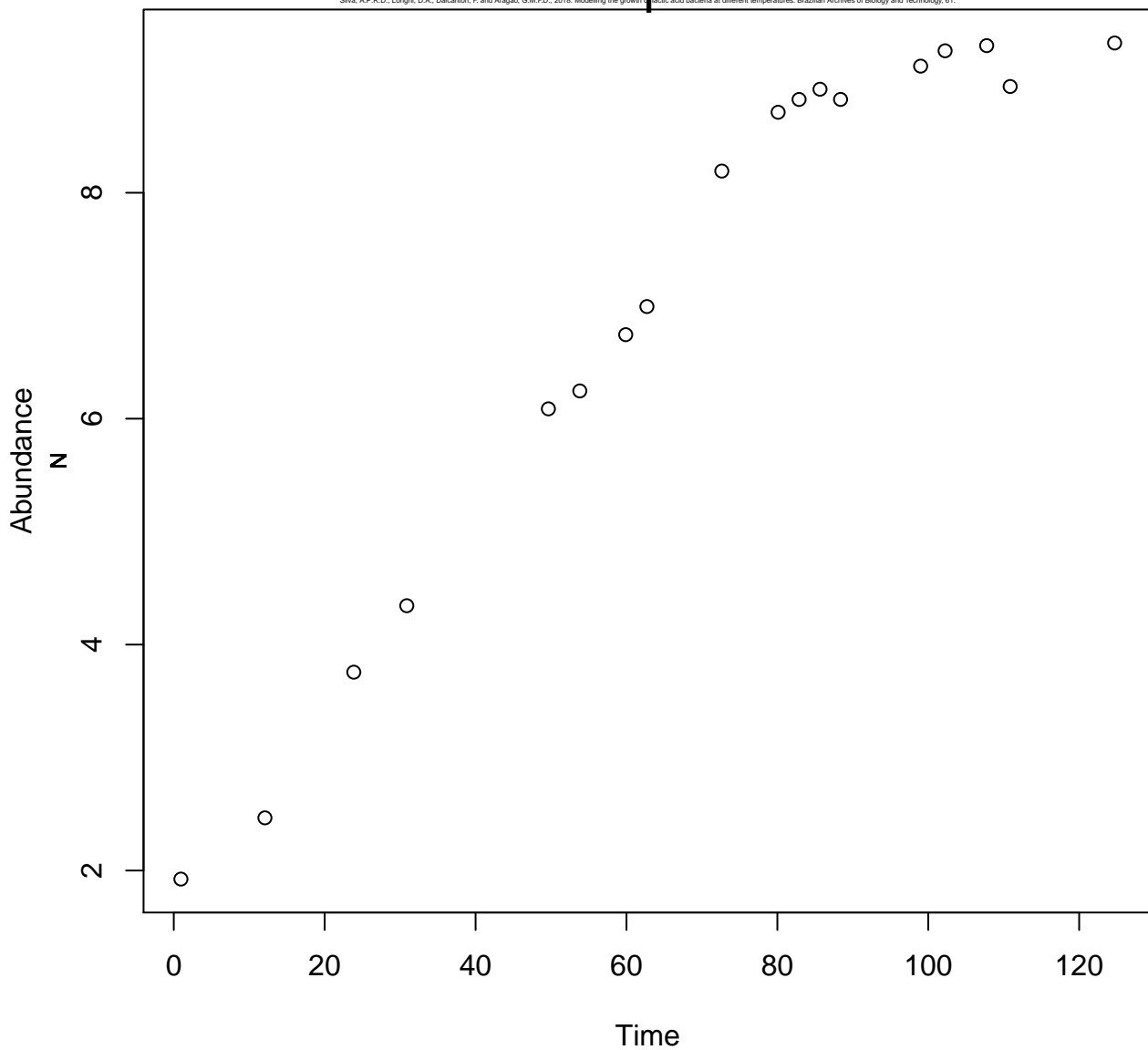
# Lactobacillus plantarum

## MRS broth

16

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



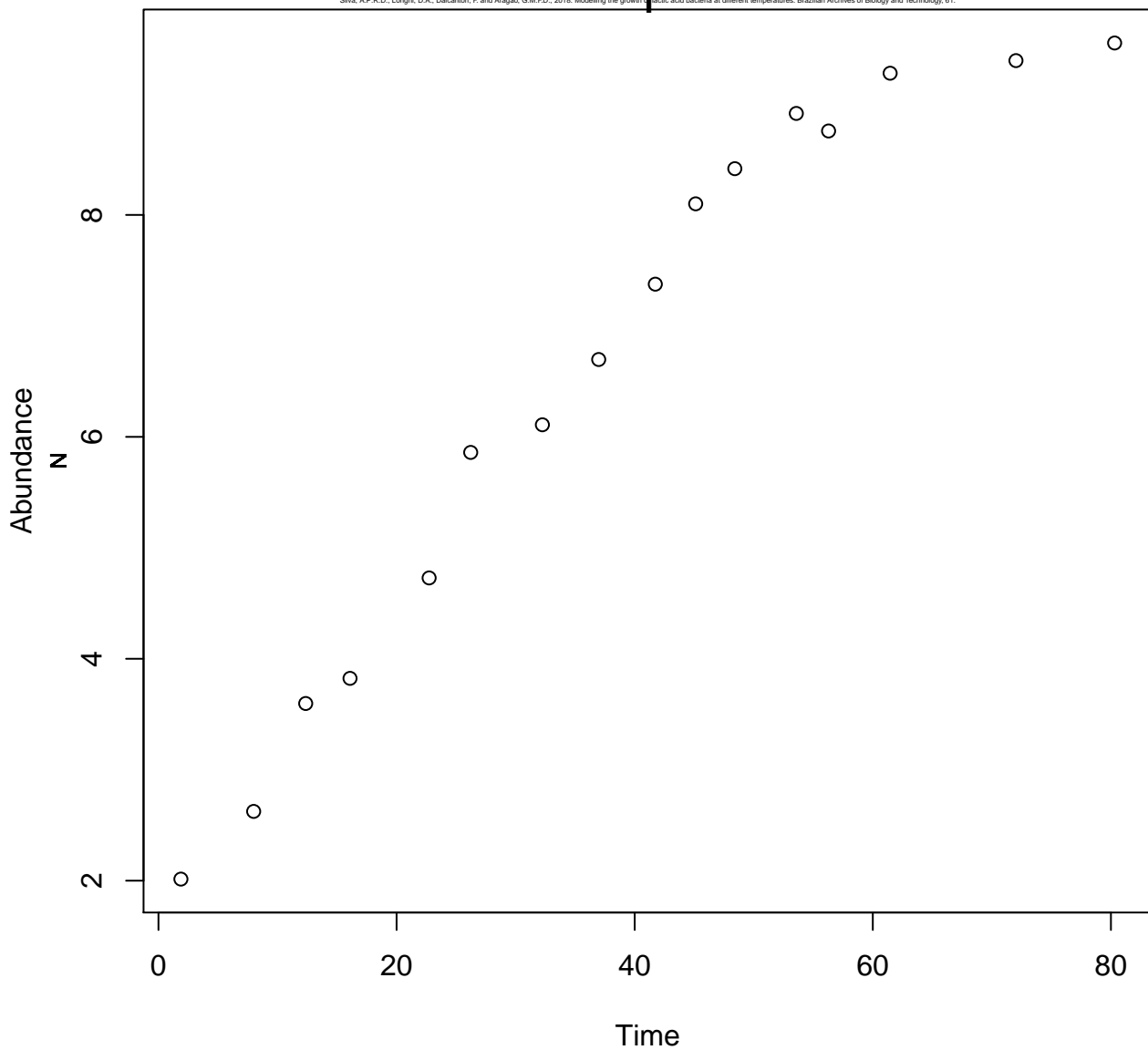
# Lactobacillus plantarum

MRS broth

20

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



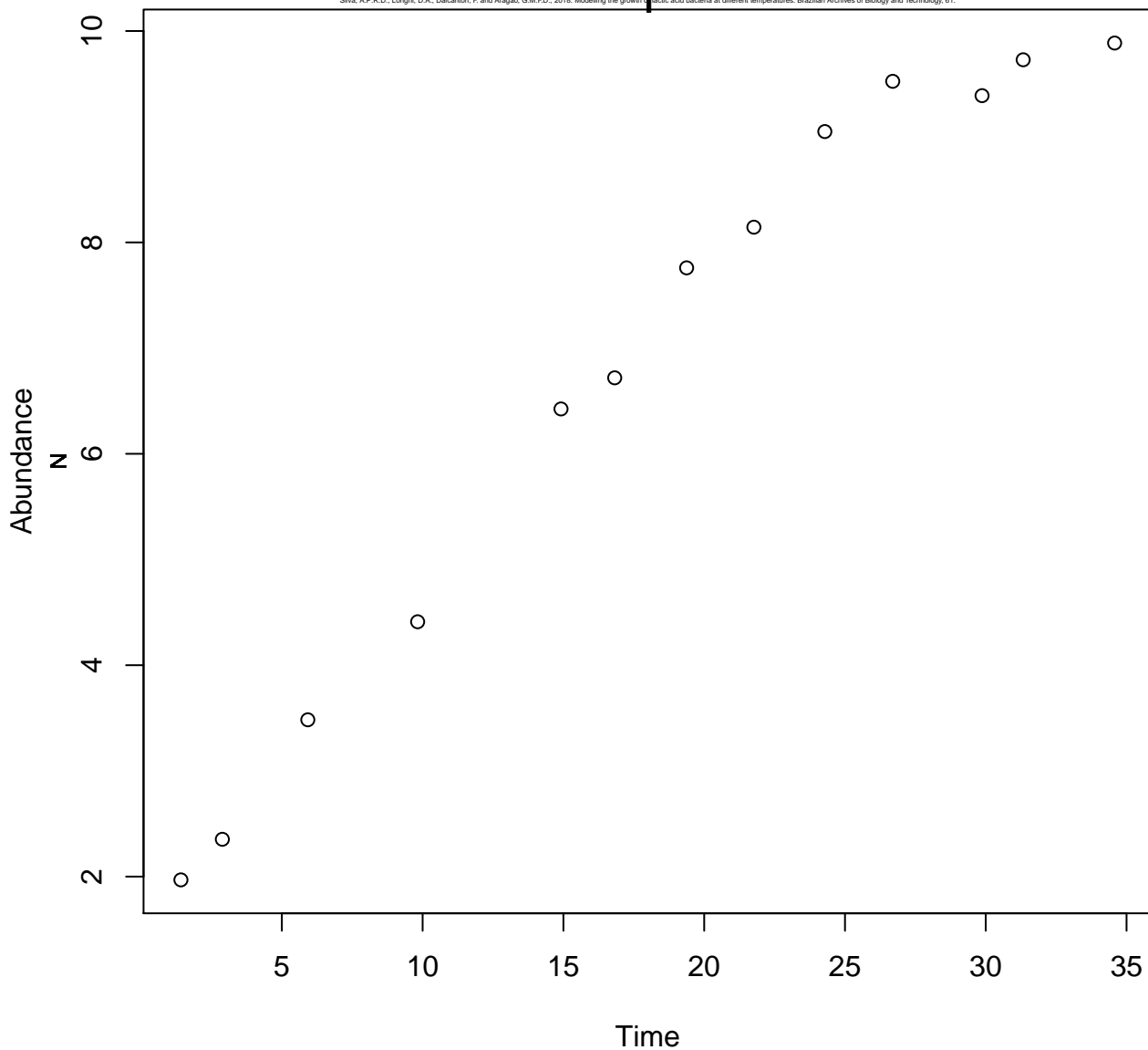
# Lactobacillus plantarum

MRS broth

30

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



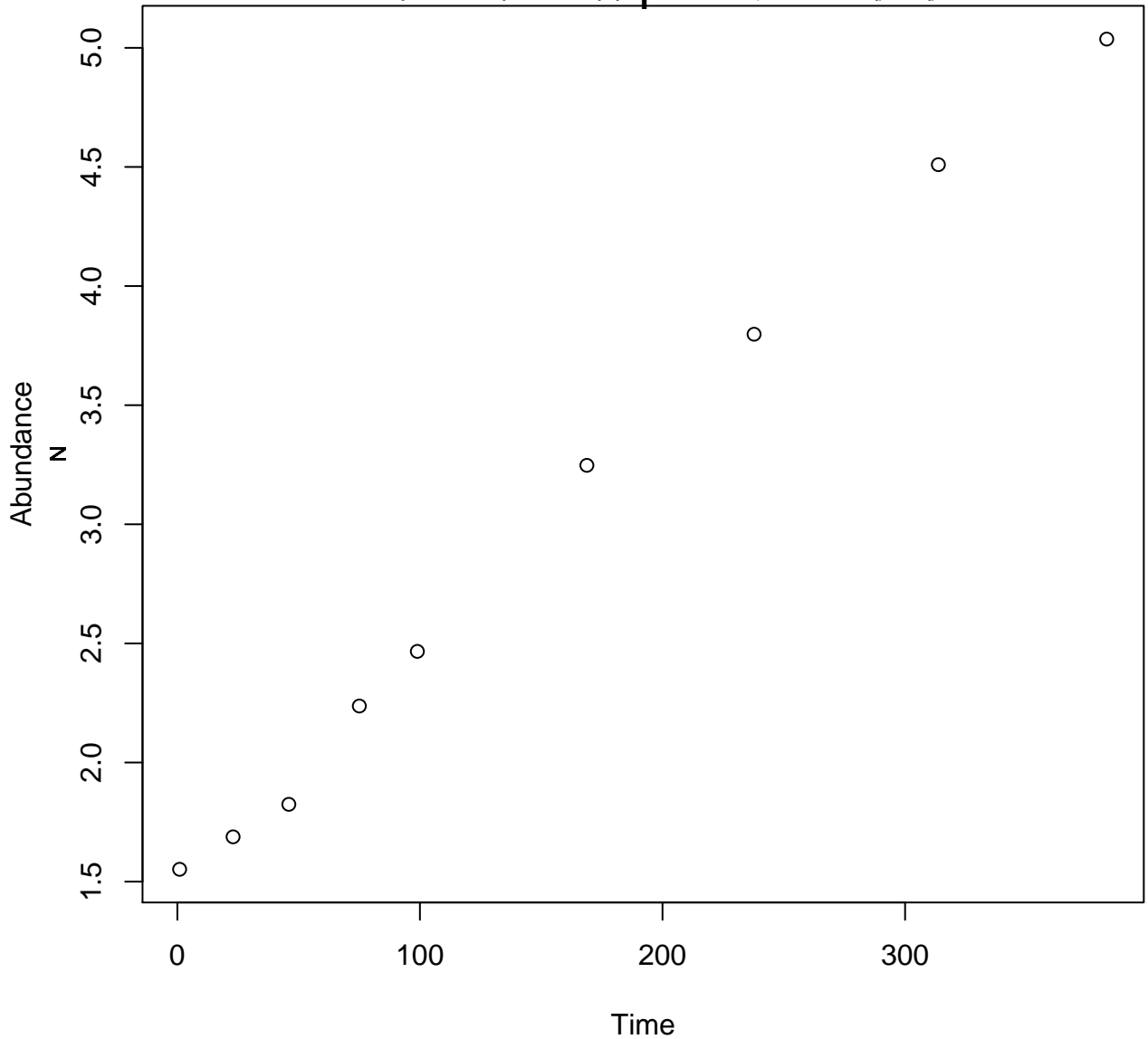
# Weissella viridescens

## MRS broth

4

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.





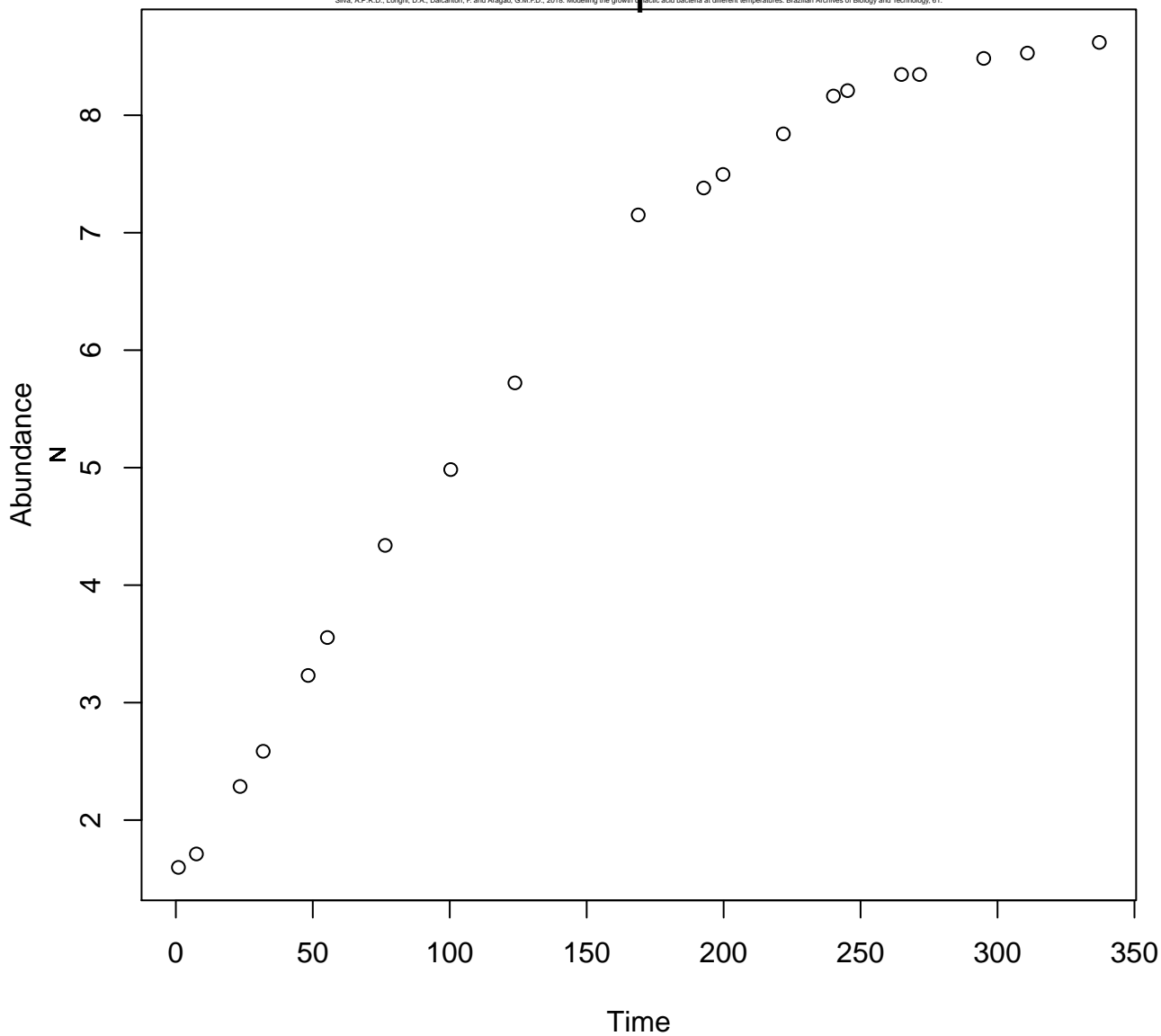
# Weissella viridescens

MRS broth

8

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



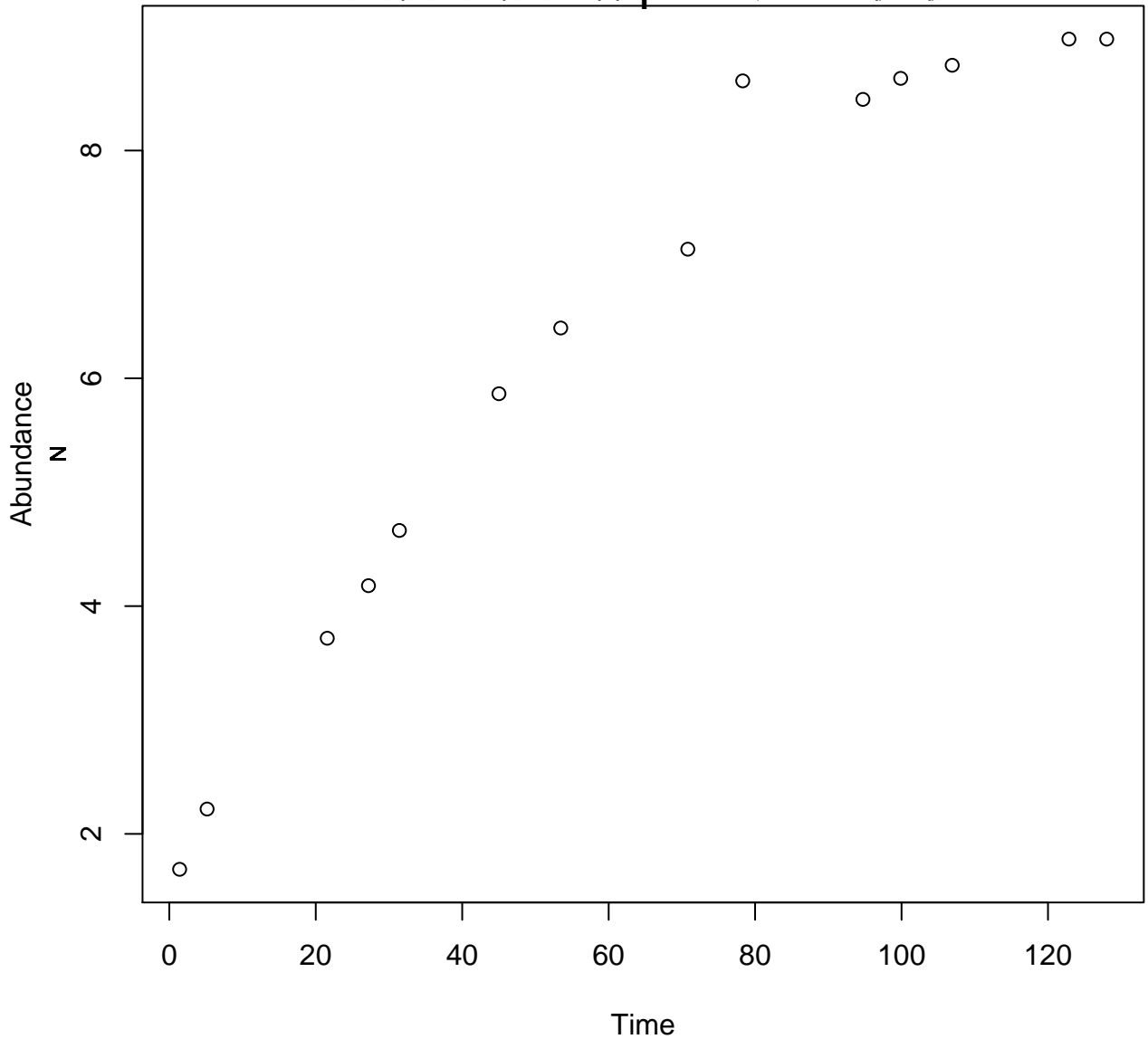
# Weissella viridescens

MRS broth

12

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



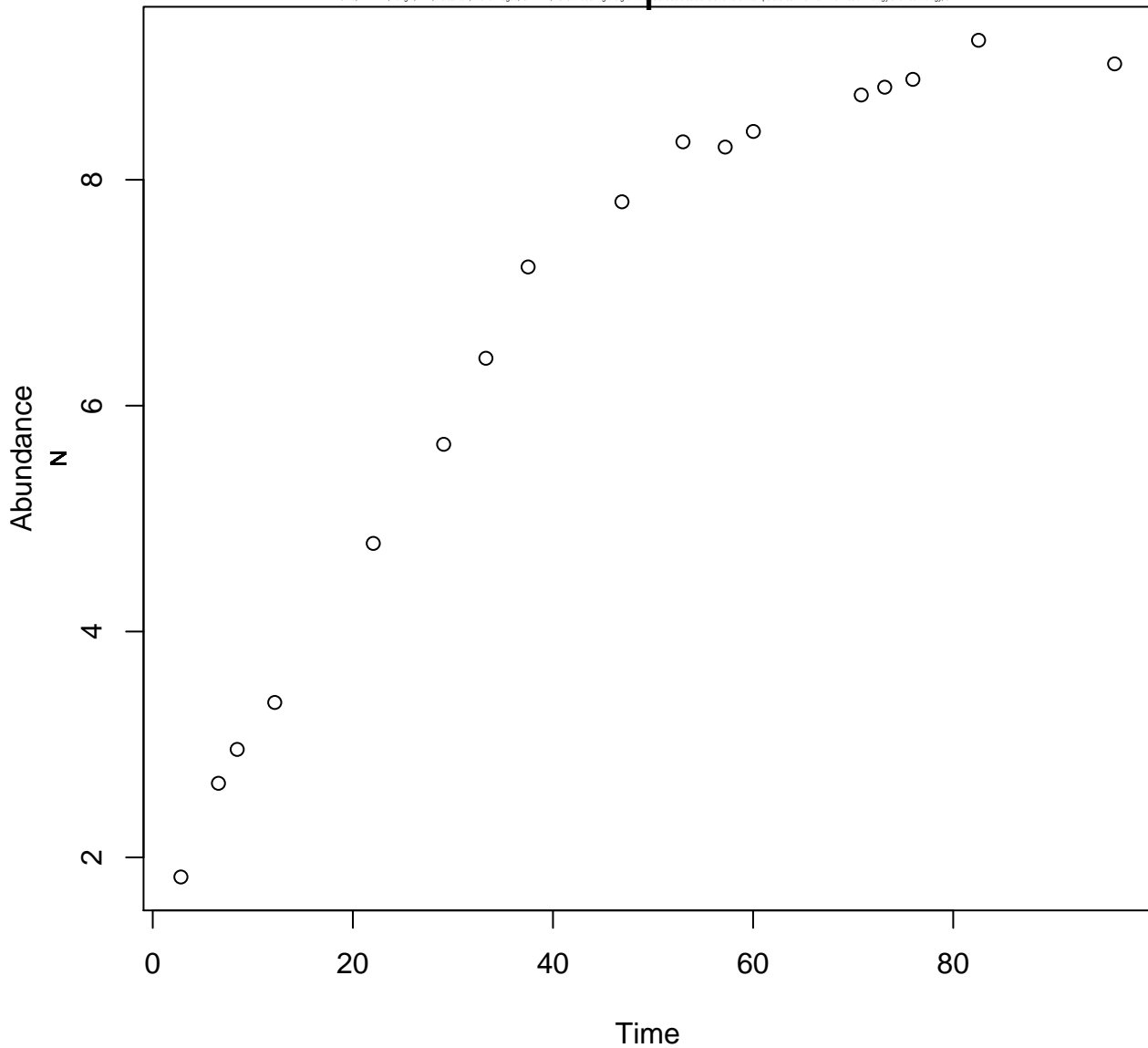
# Weissella viridescens

MRS broth

16

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



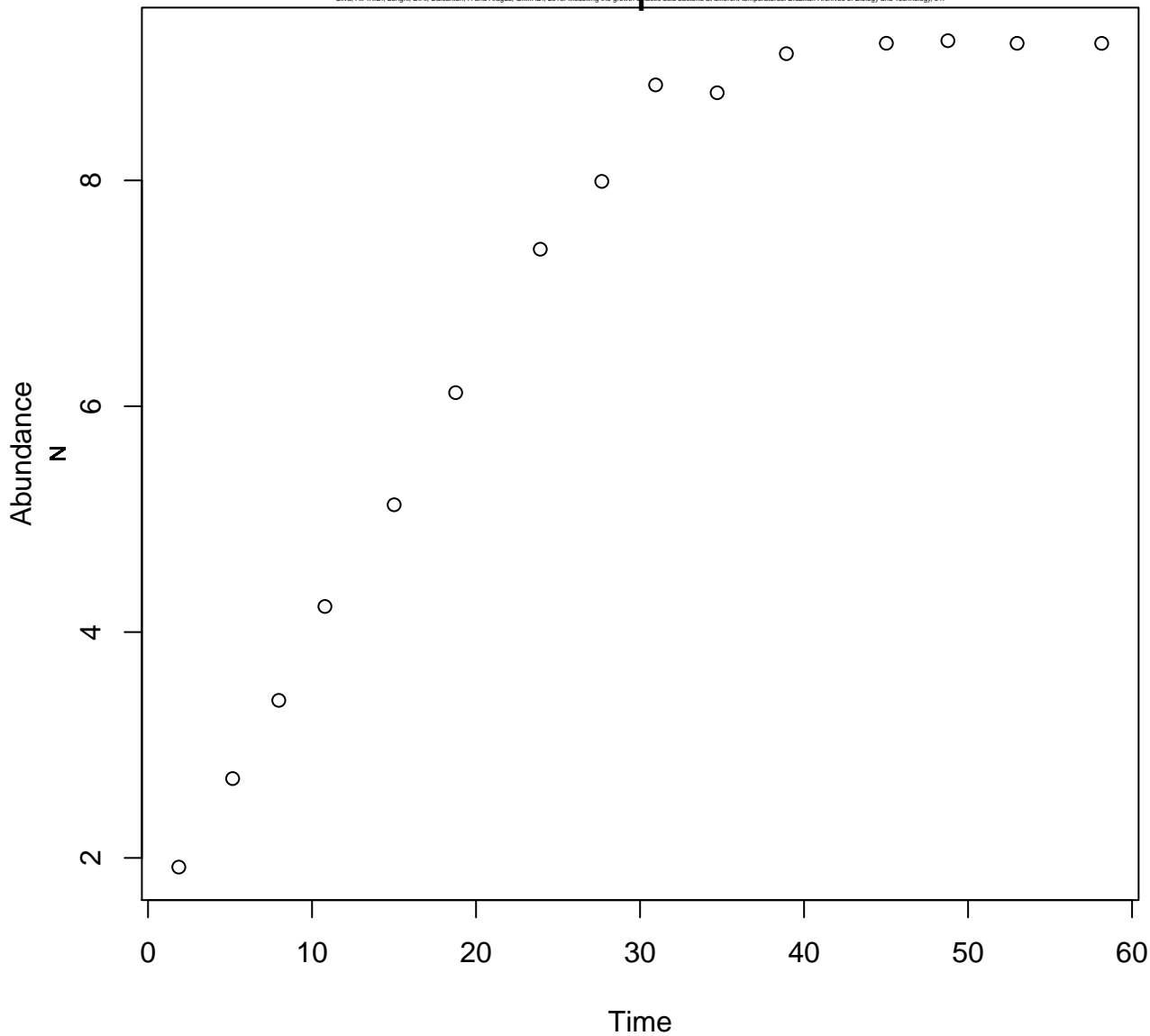
# Weissella viridescens

MRS broth

20

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



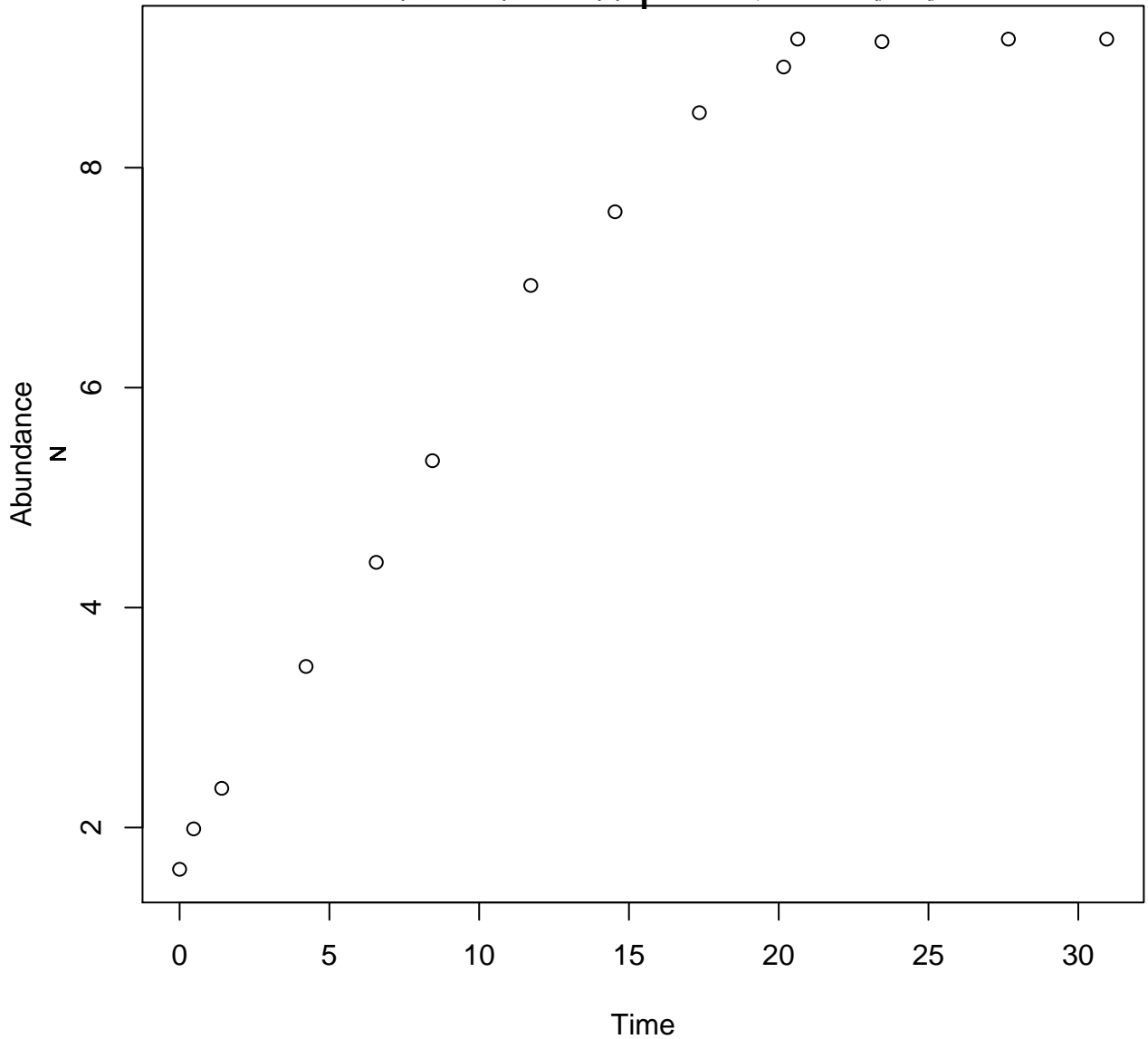
# Weissella viridescens

MRS broth

30

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



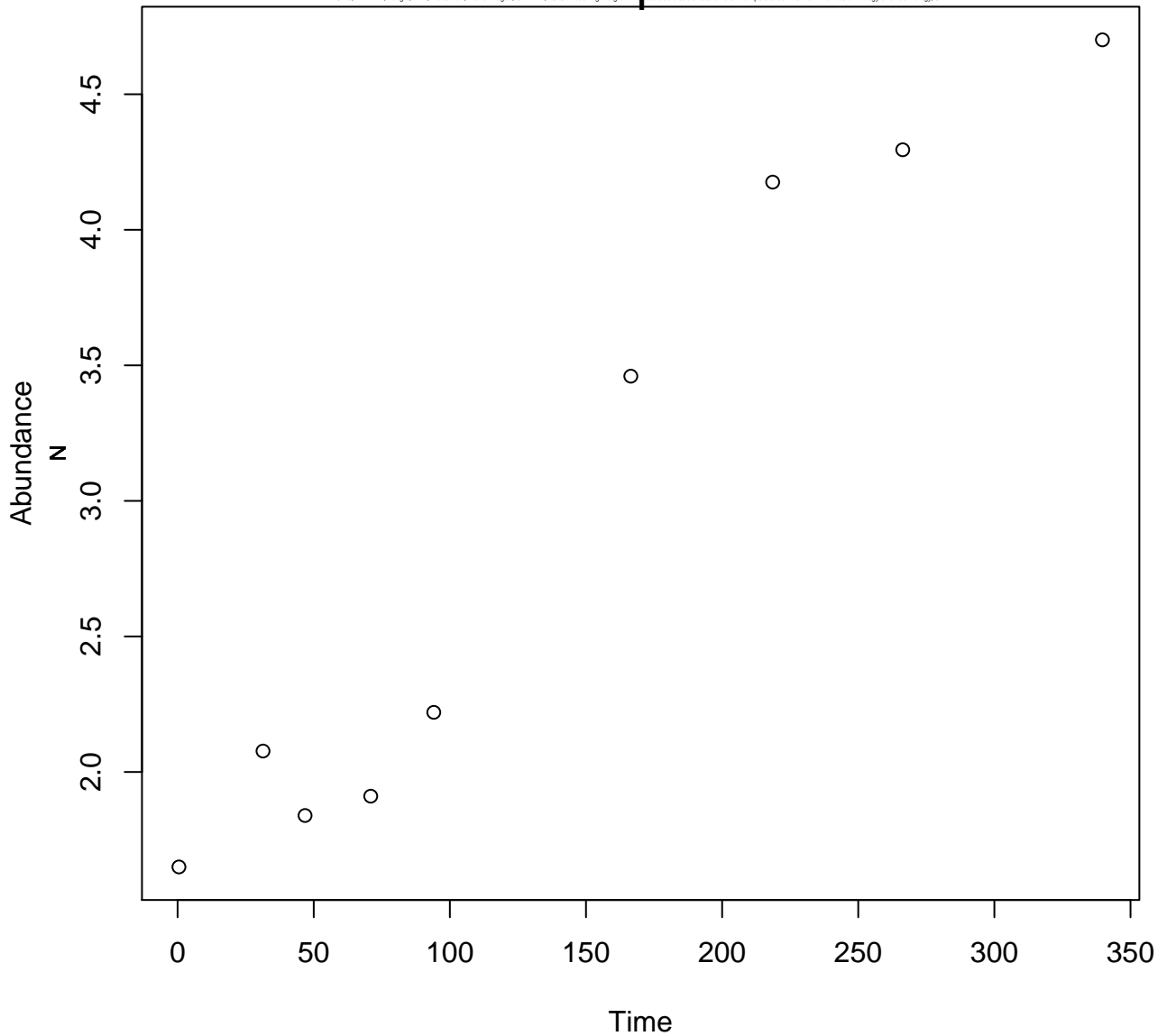
# Lactobacillus sakei

MRS broth

4

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



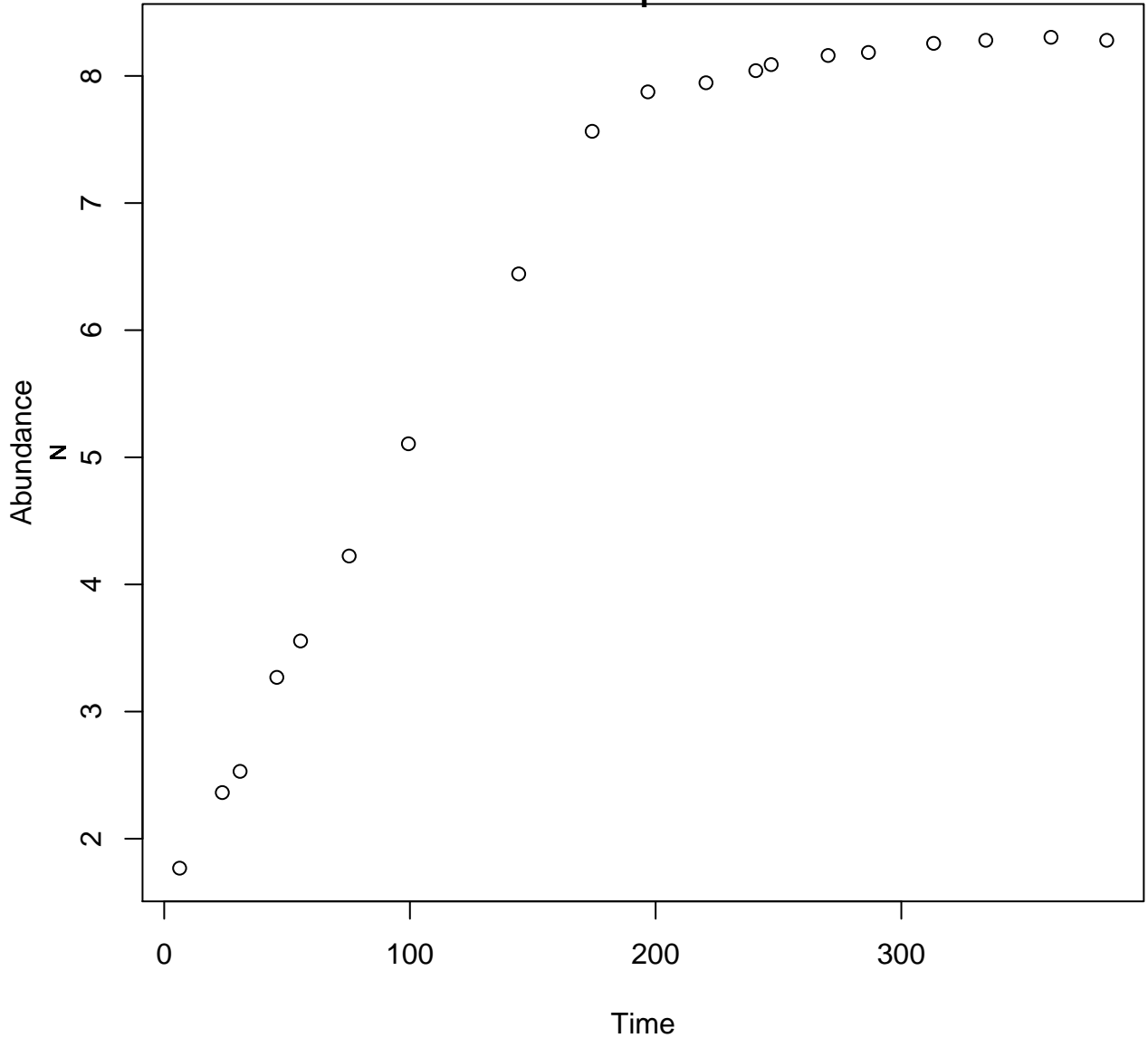
# Lactobacillus sakei

## MRS broth

8

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



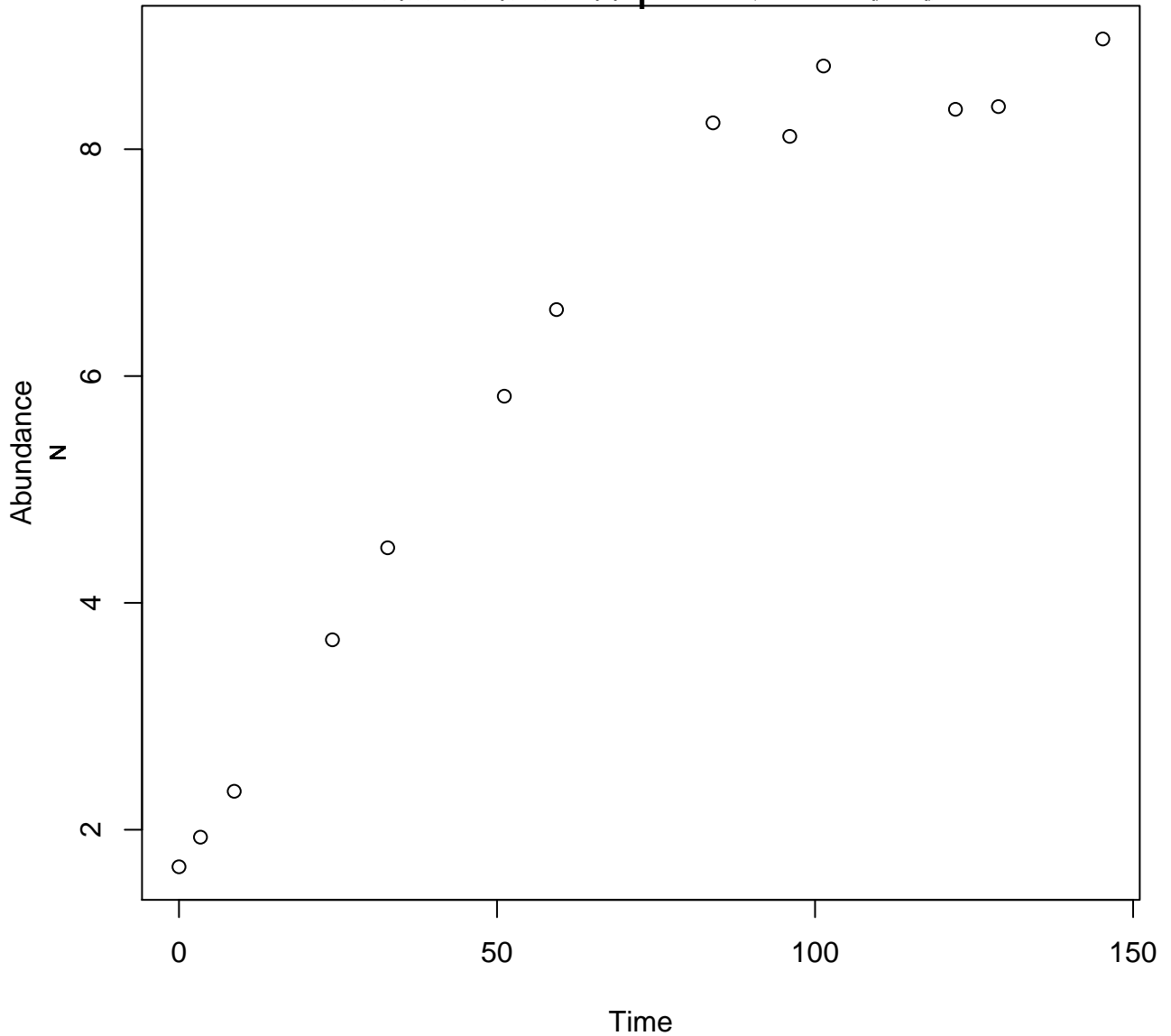
# Lactobacillus sakei

## MRS broth

12

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.





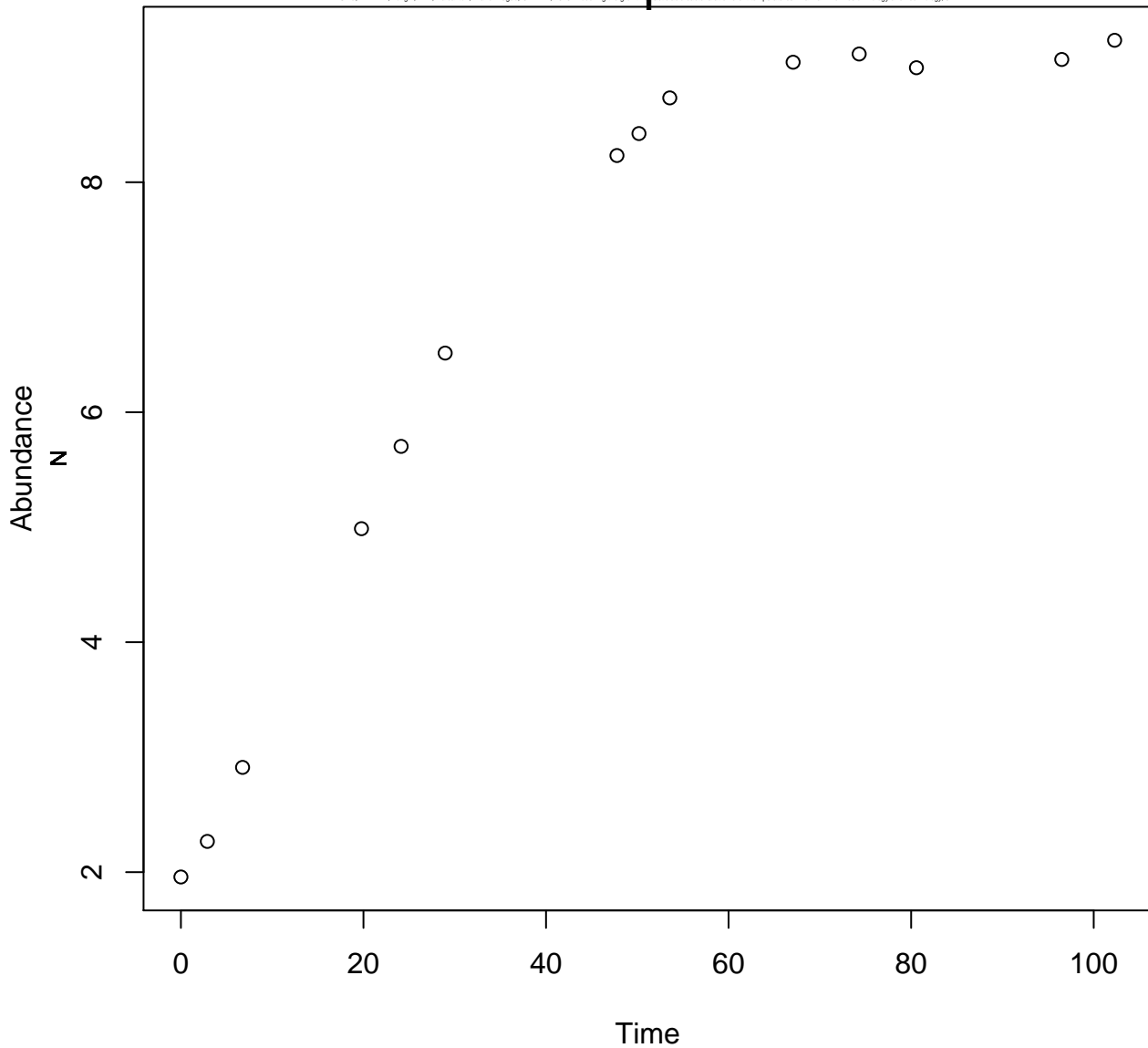
# Lactobacillus sakei

MRS broth

16

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



# Lactobacillus sakei

MRS broth

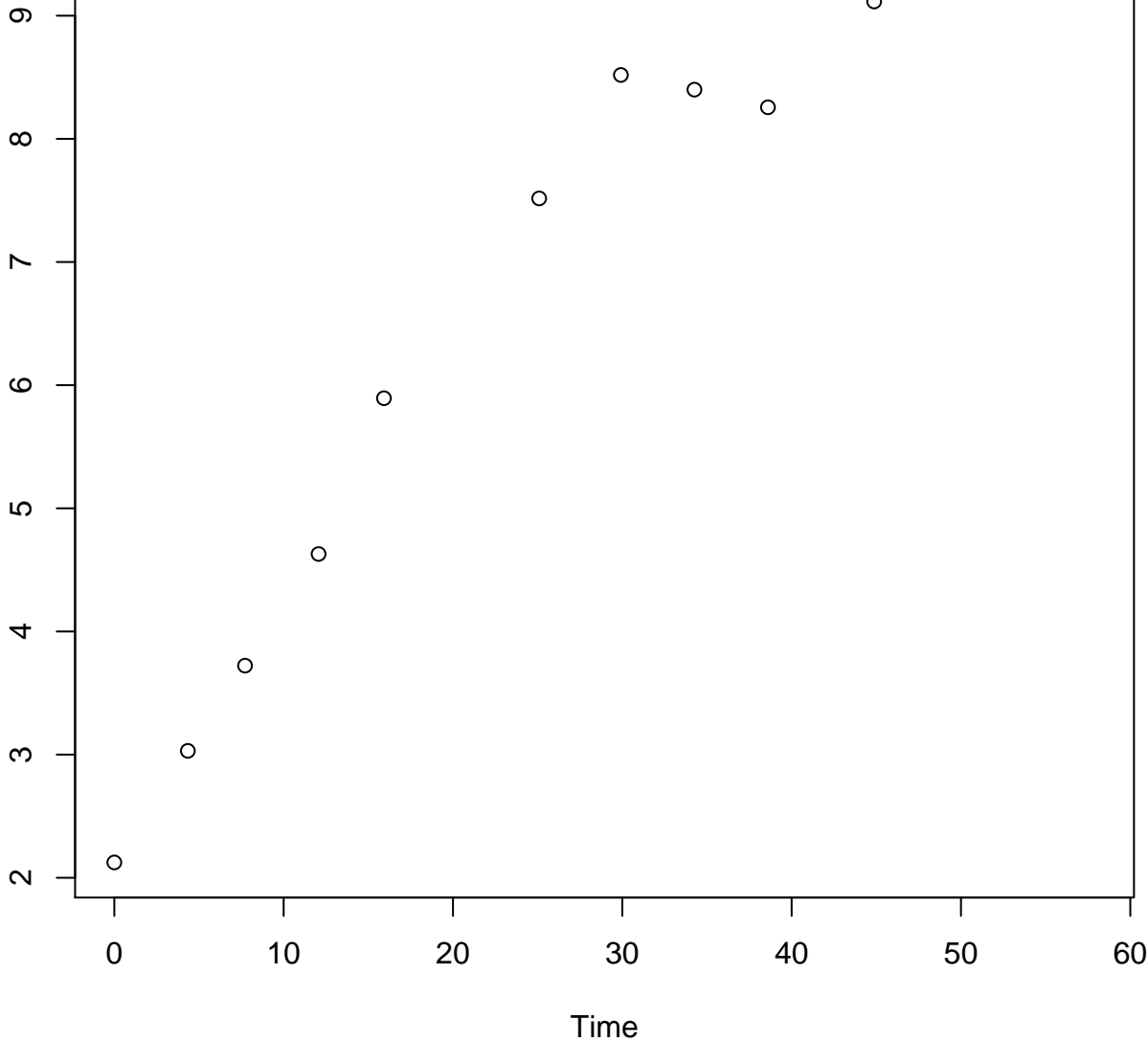
20

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.

Abundance

N



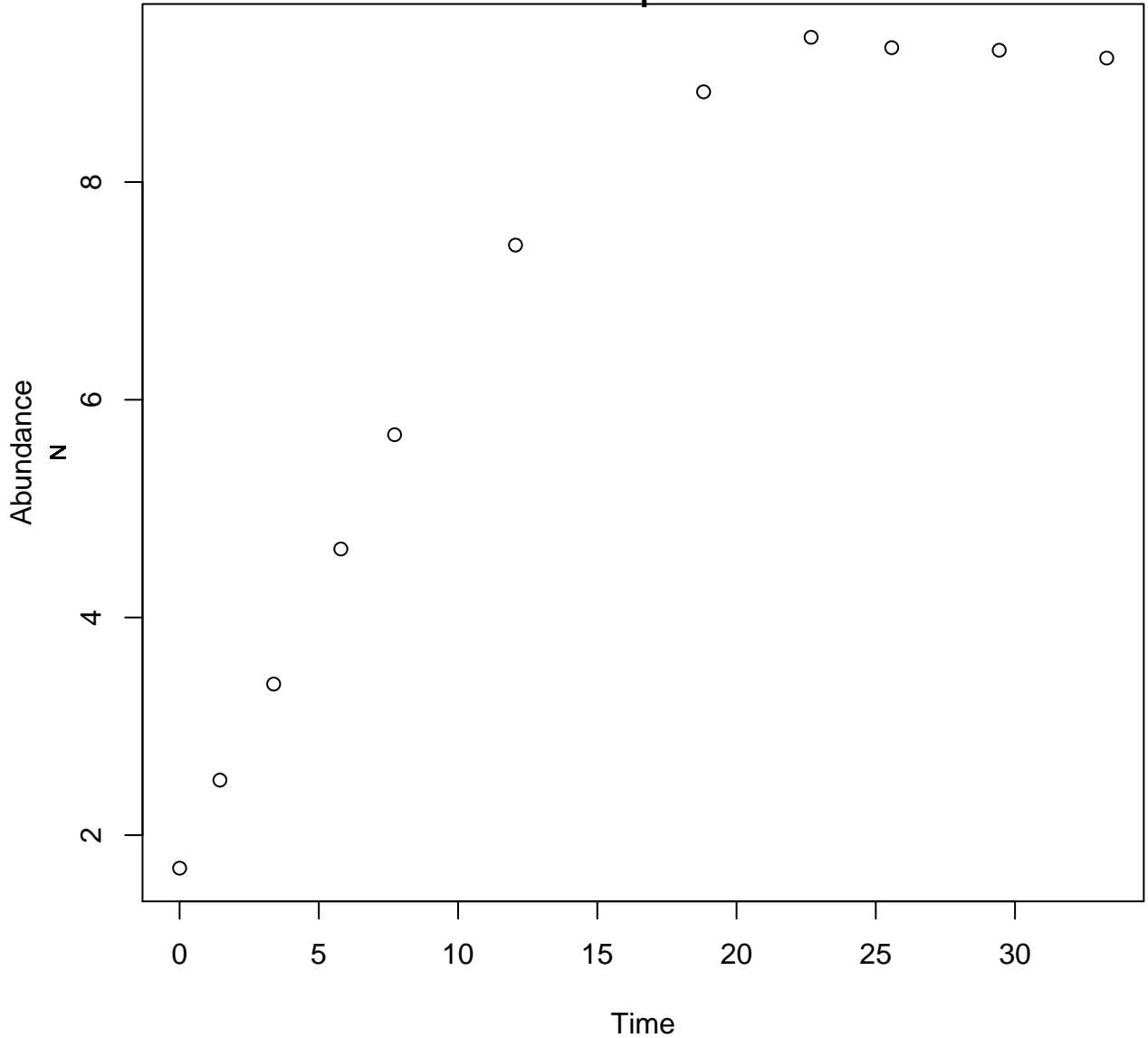
# Lactobacillus sakei

MRS broth

30

1

Silva, A.P.R.D., Longhi, D.A., Dalcanton, F. and Aragão, G.M.F.D., 2018. Modelling the growth of lactic acid bacteria at different temperatures. Brazilian Archives of Biology and Technology, 61.



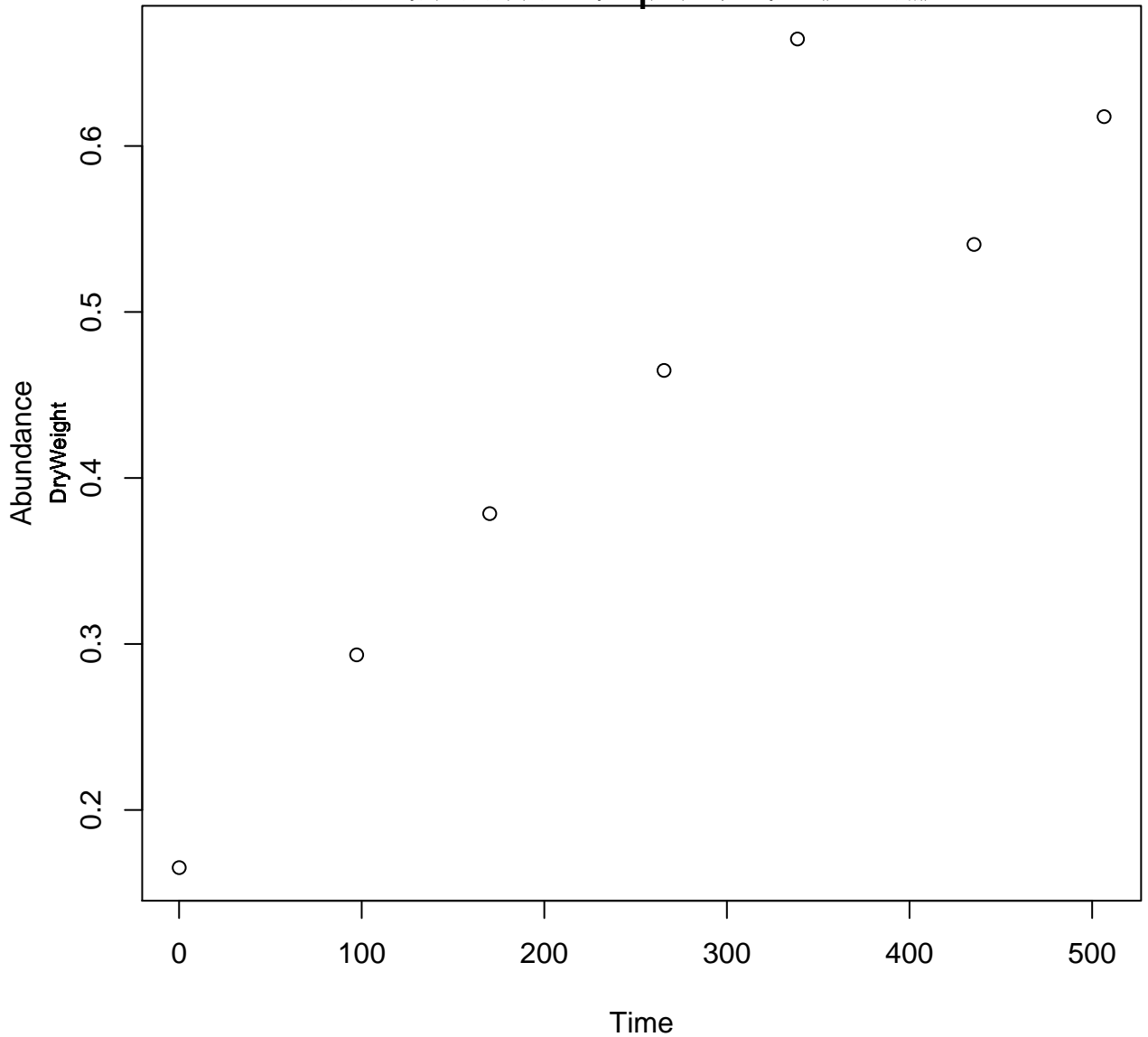
# Oscillatoria agardhii Strain 97

Z8

15

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(8), pp.2658-2666.



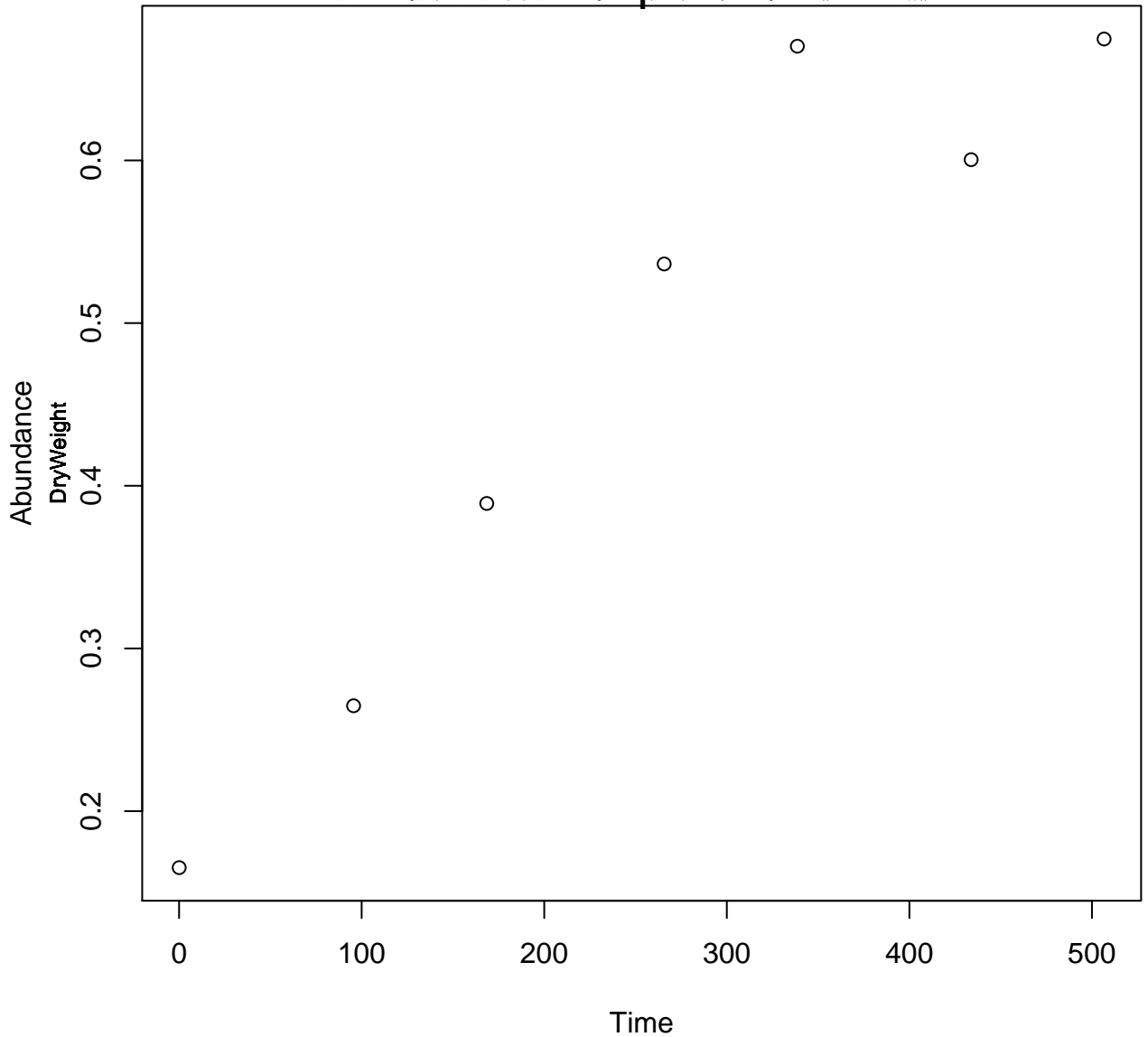
# Oscillatoria agardhii Strain 97

Z8

20

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(8), pp.2658-2666.



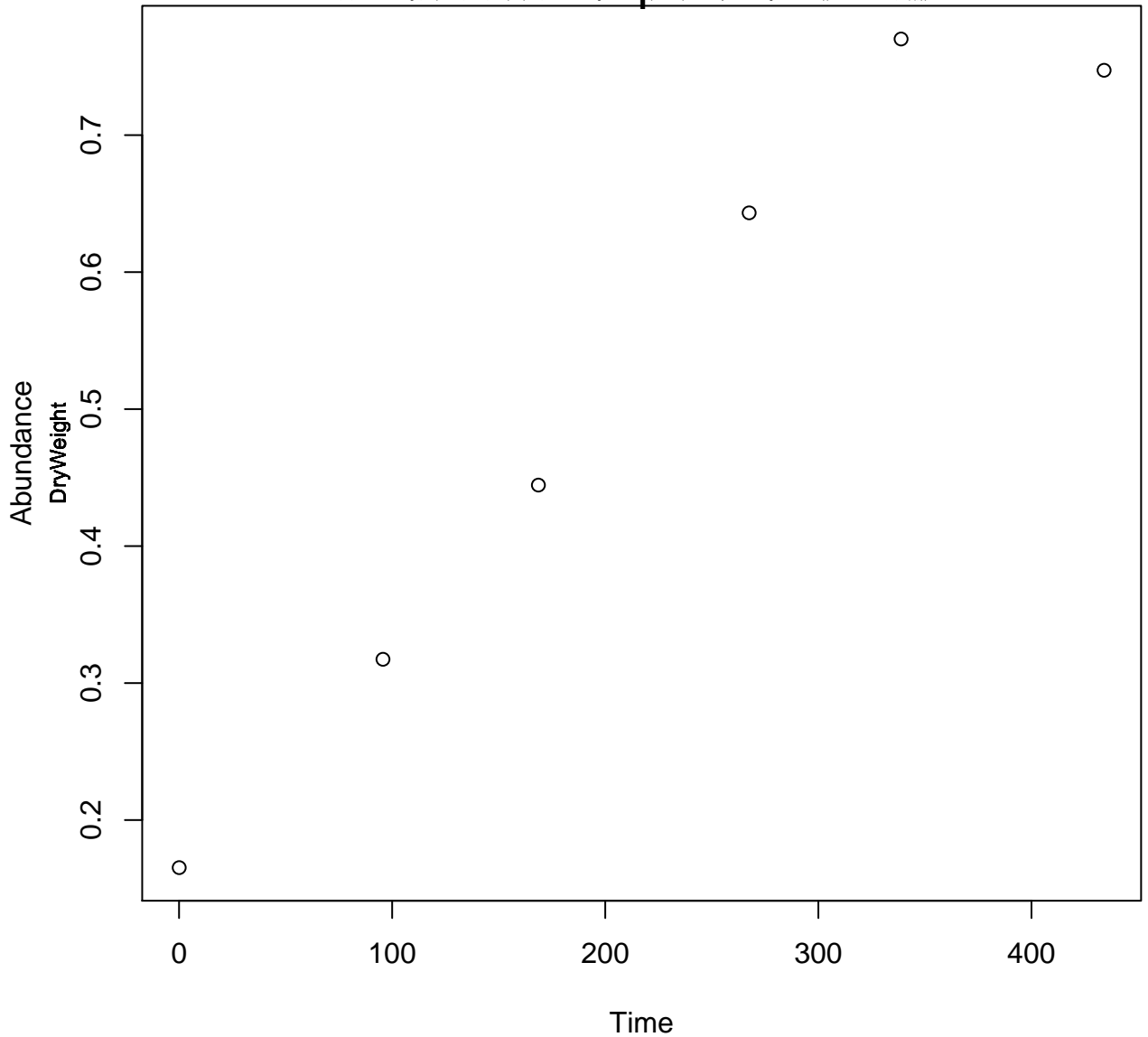
# Oscillatoria agardhii Strain 97

Z8

25

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(8), pp.2658-2666.



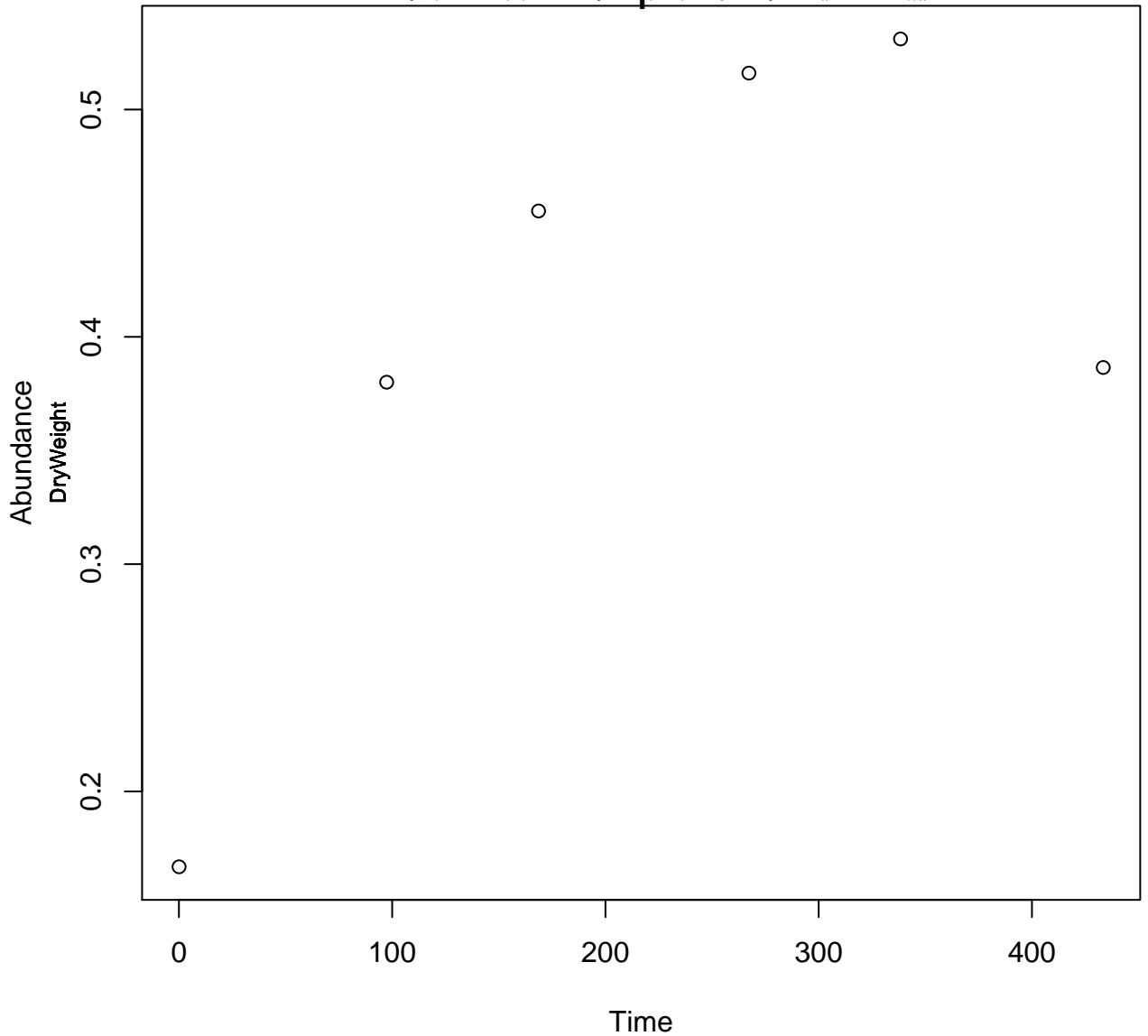
# Oscillatoria agardhii Strain 97

Z8

30

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(8), pp.2658-2666.



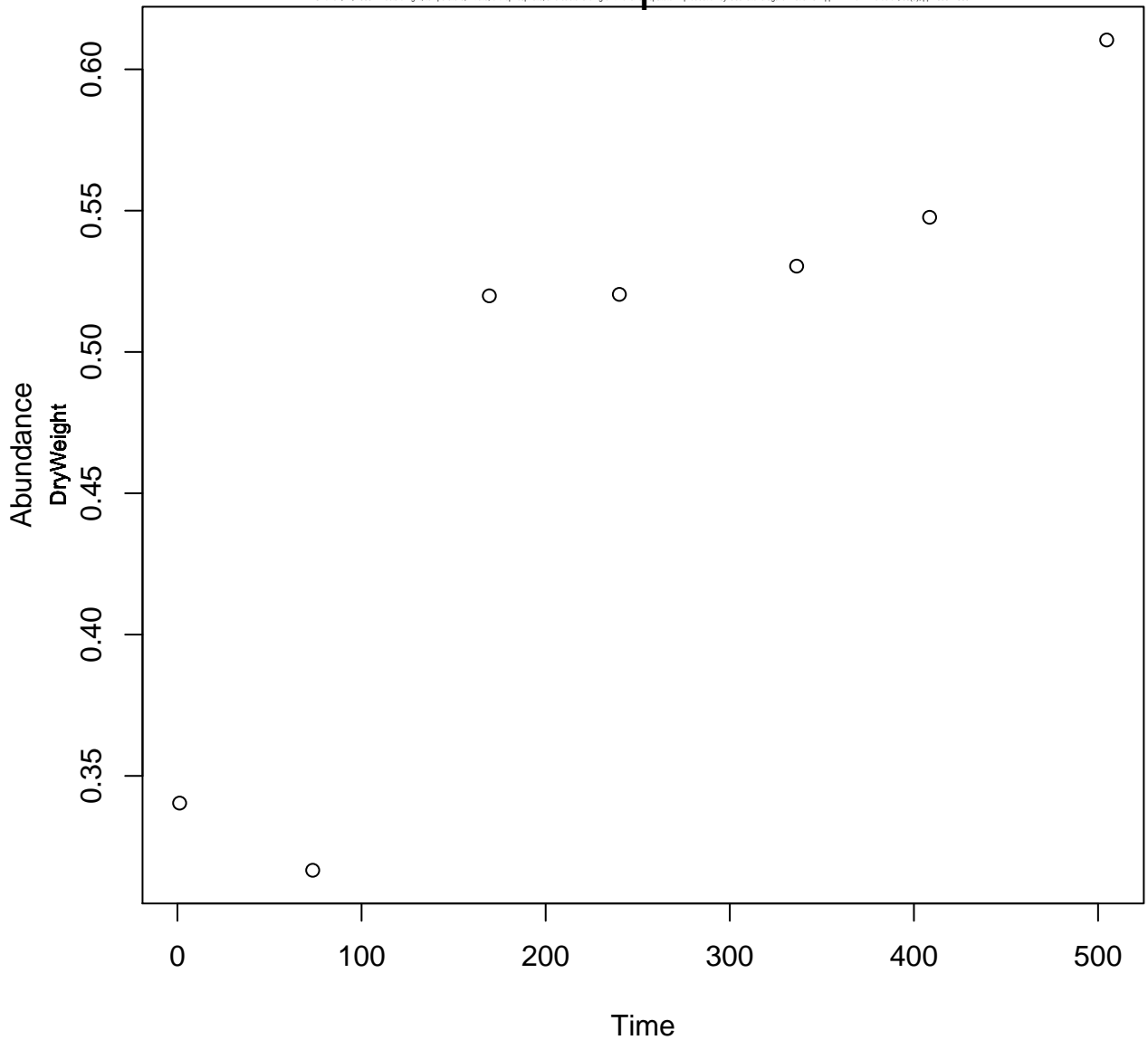
# Oscillatoria agardhii StrainCYA 128

Z8

15

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.* 56(9), pp.2658-2666.





# Oscillatoria agardhii StrainCYA 128

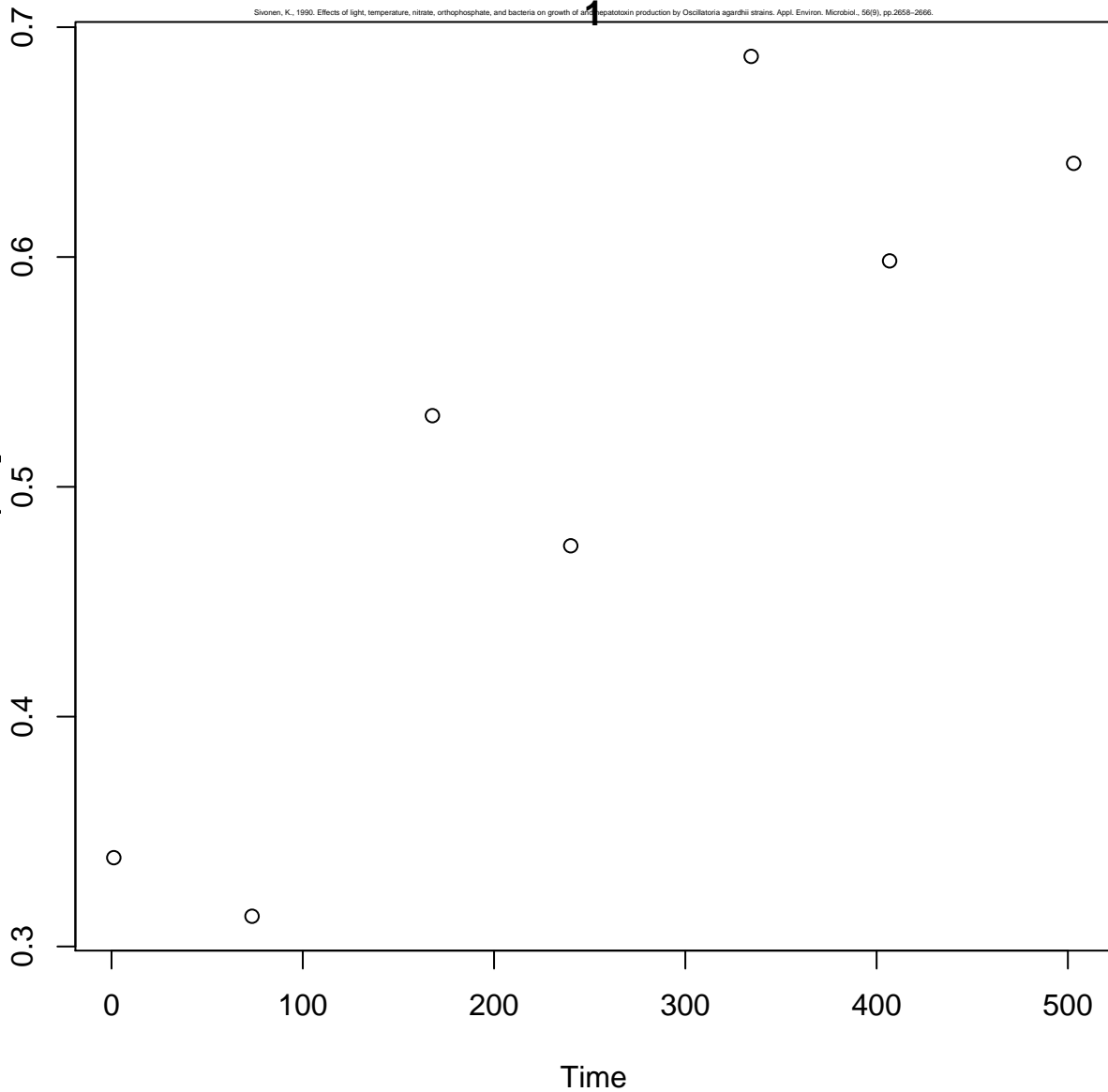
Z8

20

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(9), pp.2658-2666.

Abundance  
DryWeight



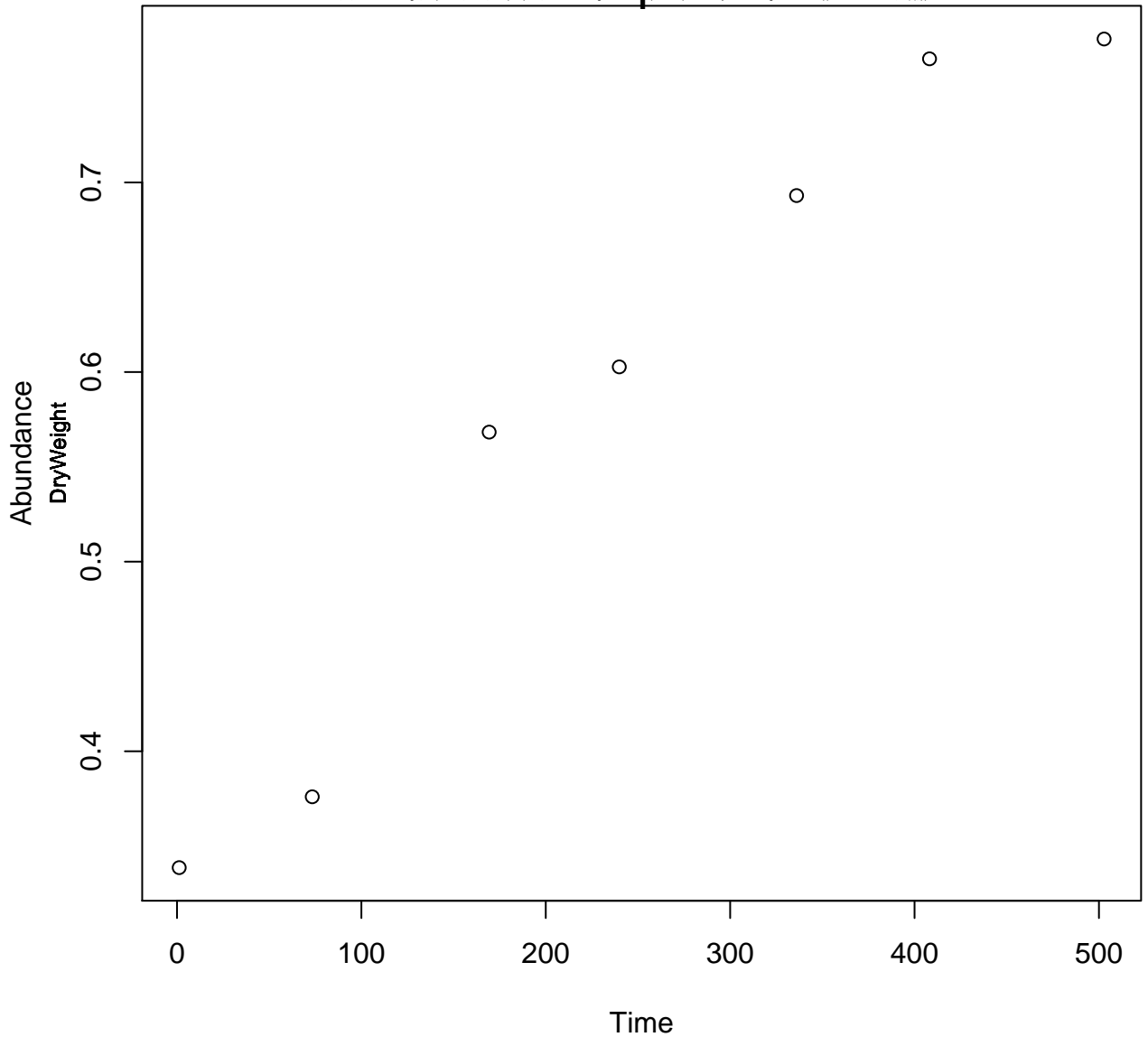
# Oscillatoria agardhii StrainCYA 128

Z8

25

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(8), pp.2658-2666.



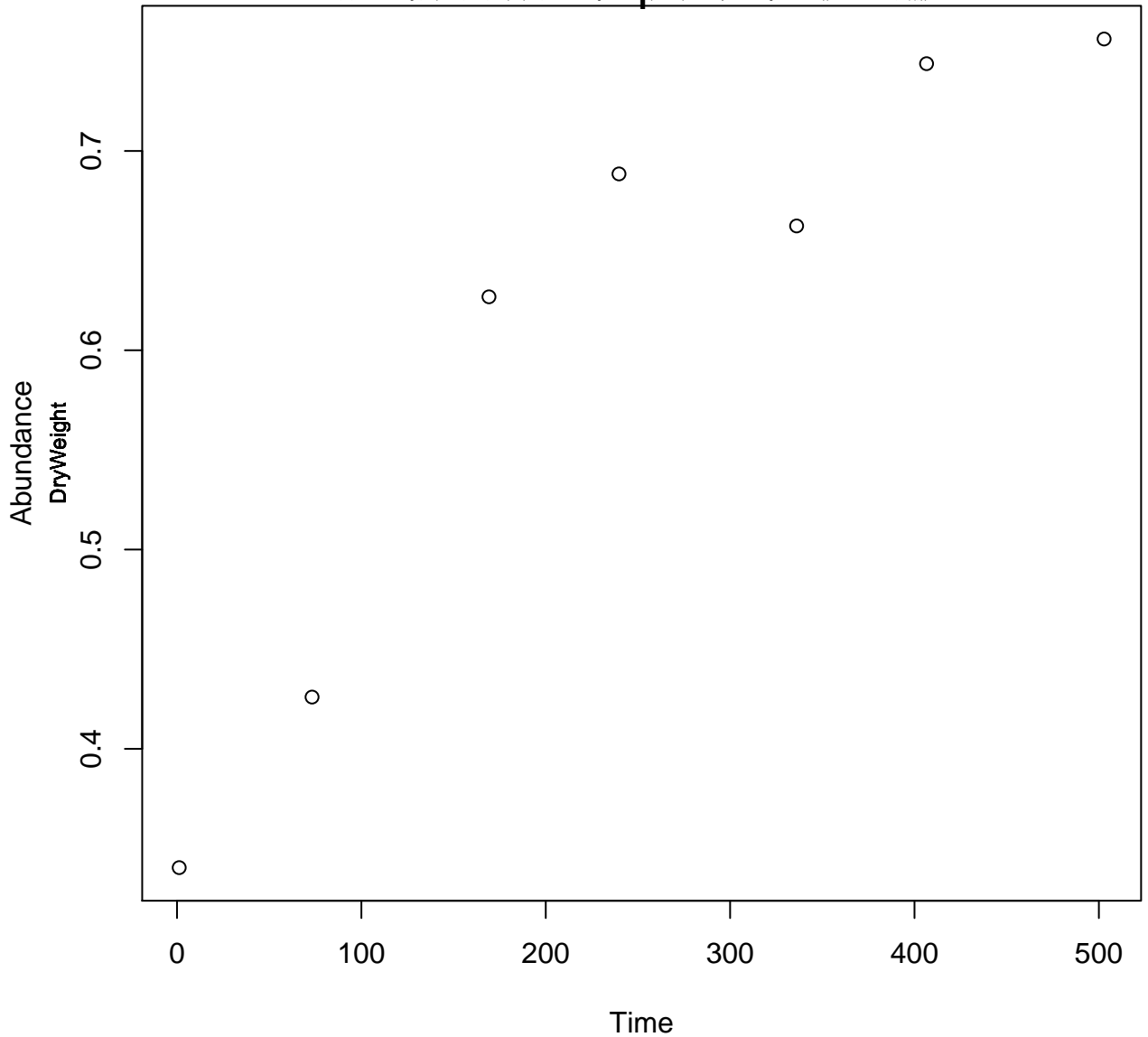
# Oscillatoria agardhii StrainCYA 128

Z8

30

1

Sivonen, K., 1990. Effects of light, temperature, nitrate, orthophosphate, and bacteria on growth of and hepatotoxin production by *Oscillatoria agardhii* strains. *Appl. Environ. Microbiol.*, 56(8), pp.2658-2666.



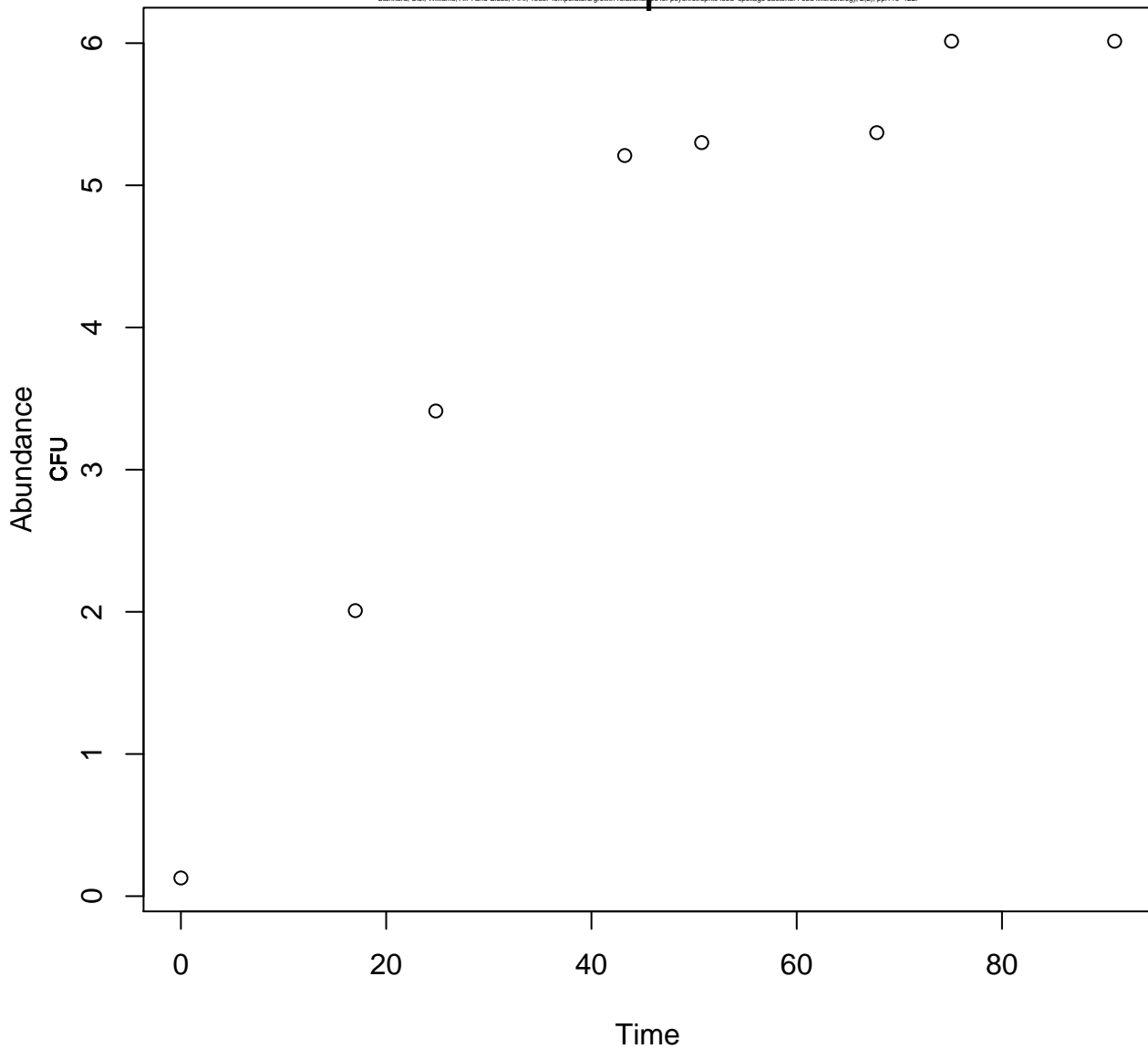
**Pseudomonas sp.**

**APT Broth**

**15**

**1**

Stannard, C.J., Williams, A.P. and Gibbs, P.A., 1985. Temperature/growth relationships for psychrotrophic food-spoilage bacteria. Food Microbiology, 2(2), pp.115-122.



**Pseudomonas sp.**

**APT Broth**

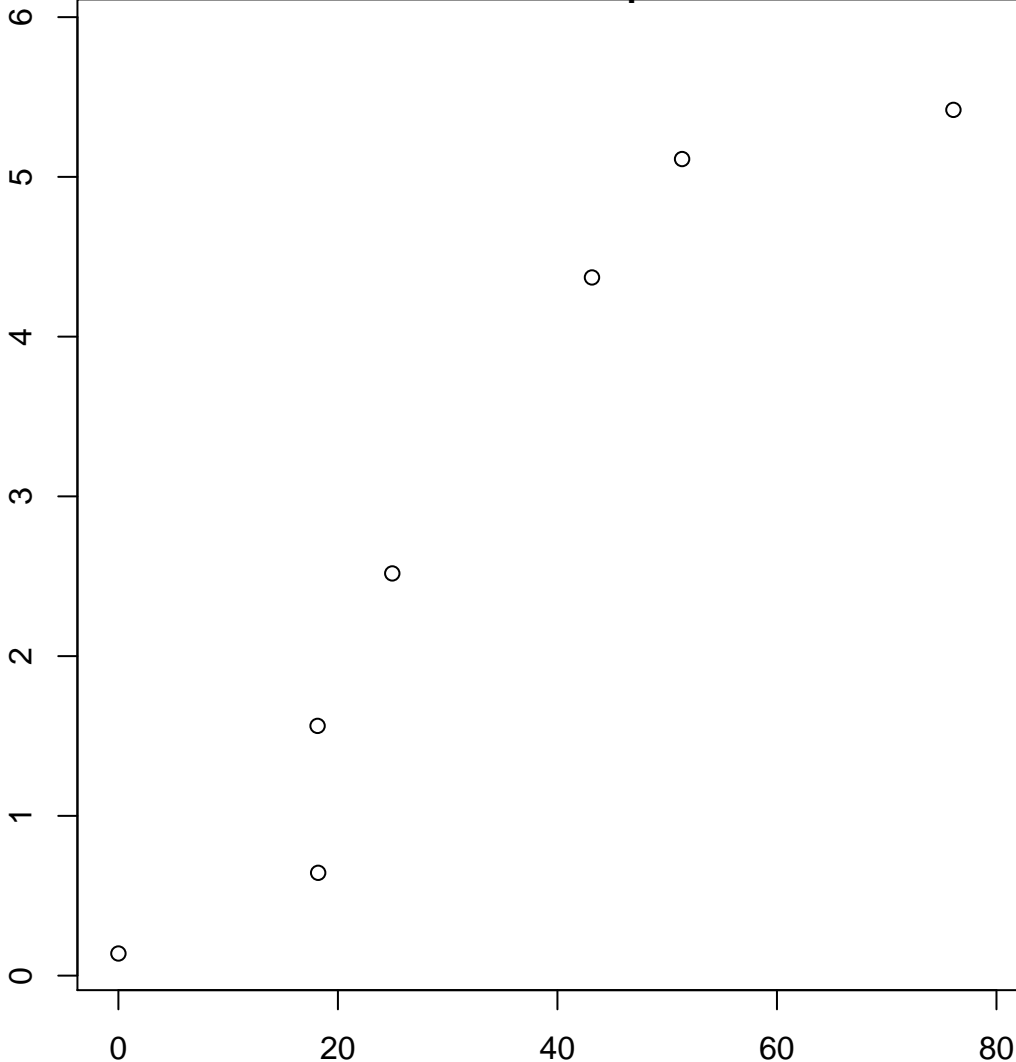
**12**

**1**

Stannard, C.J., Williams, A.P. and Gibbs, P.A., 1985. Temperature/growth relationships for psychrotrophic food-spoilage bacteria. Food Microbiology, 2(2), pp.115-122.

Abundance

CFU



Time

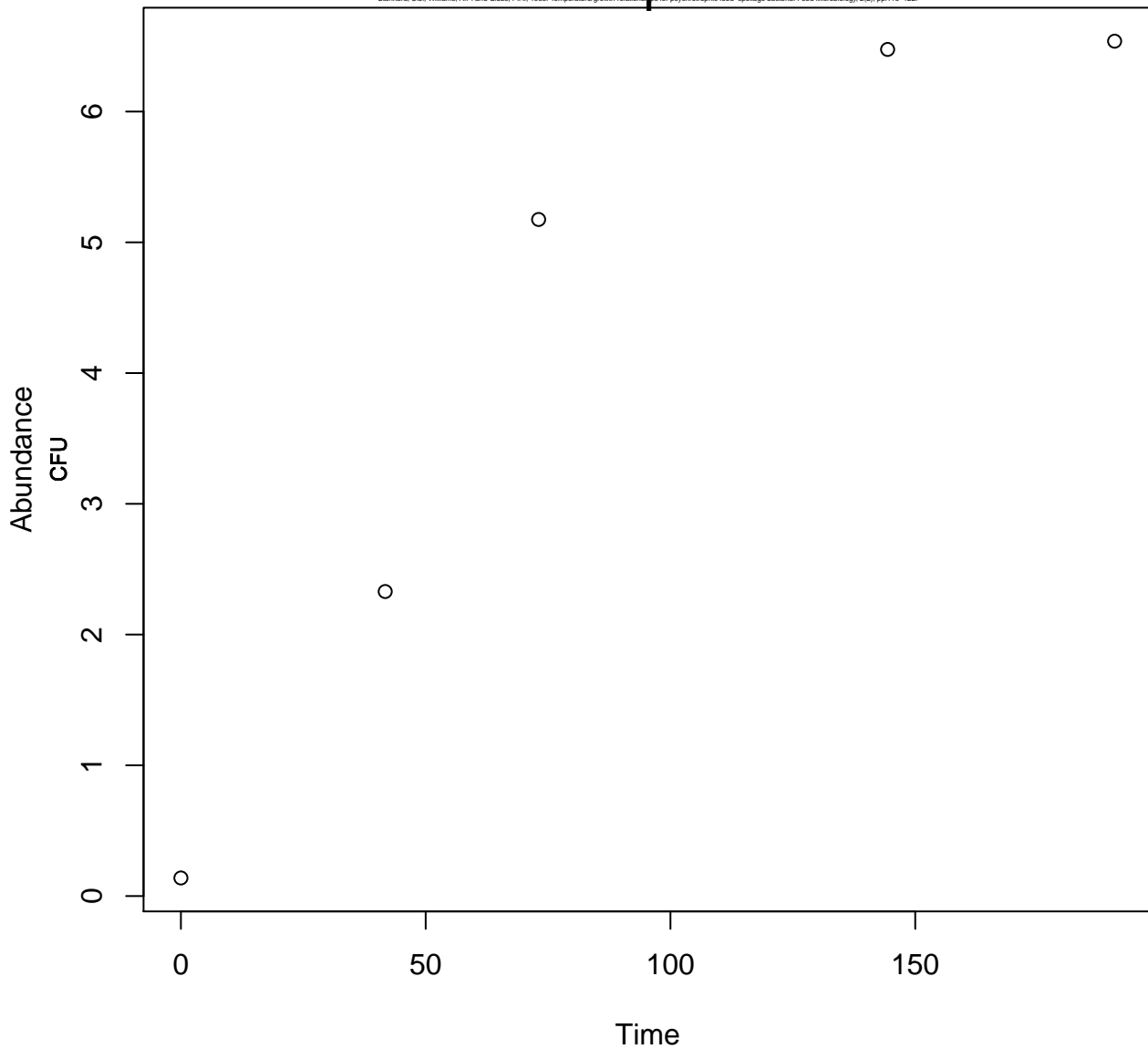
**Pseudomonas sp.**

**APT Broth**

**8**

**1**

Stannard, C.J., Williams, A.P. and Gibbs, P.A., 1985. Temperature/growth relationships for psychrotrophic food-spoilage bacteria. Food Microbiology, 2(2), pp.115-122.



**Pseudomonas sp.**

**APT Broth**

**6**

**1**

Stannard, C.J., Williams, A.P. and Gibbs, P.A., 1985. Temperature/growth relationships for psychrotrophic food-spoilage bacteria. Food Microbiology, 2(2), pp.115-122.

Abundance

CFU

6  
5  
4  
3  
2  
1  
0

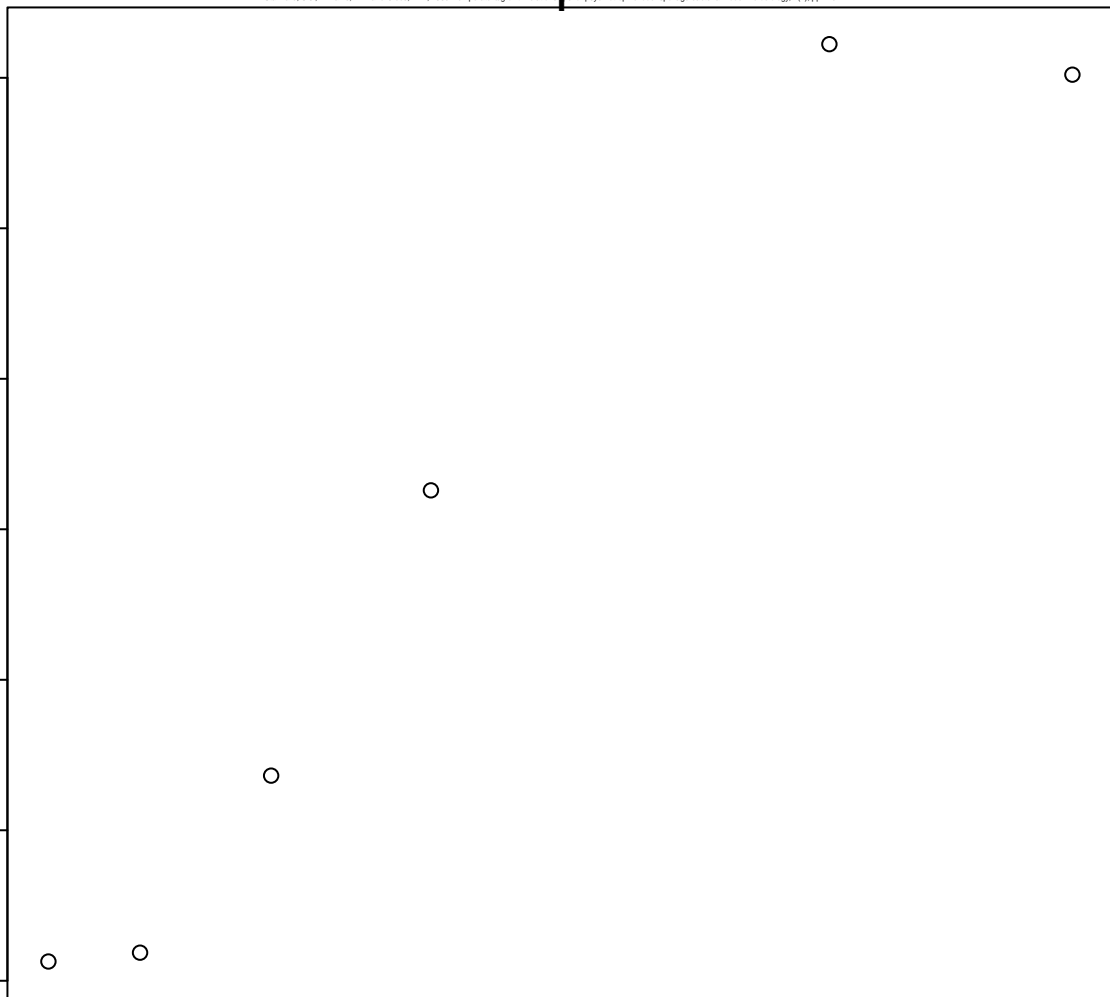
0

50

100

150

Time



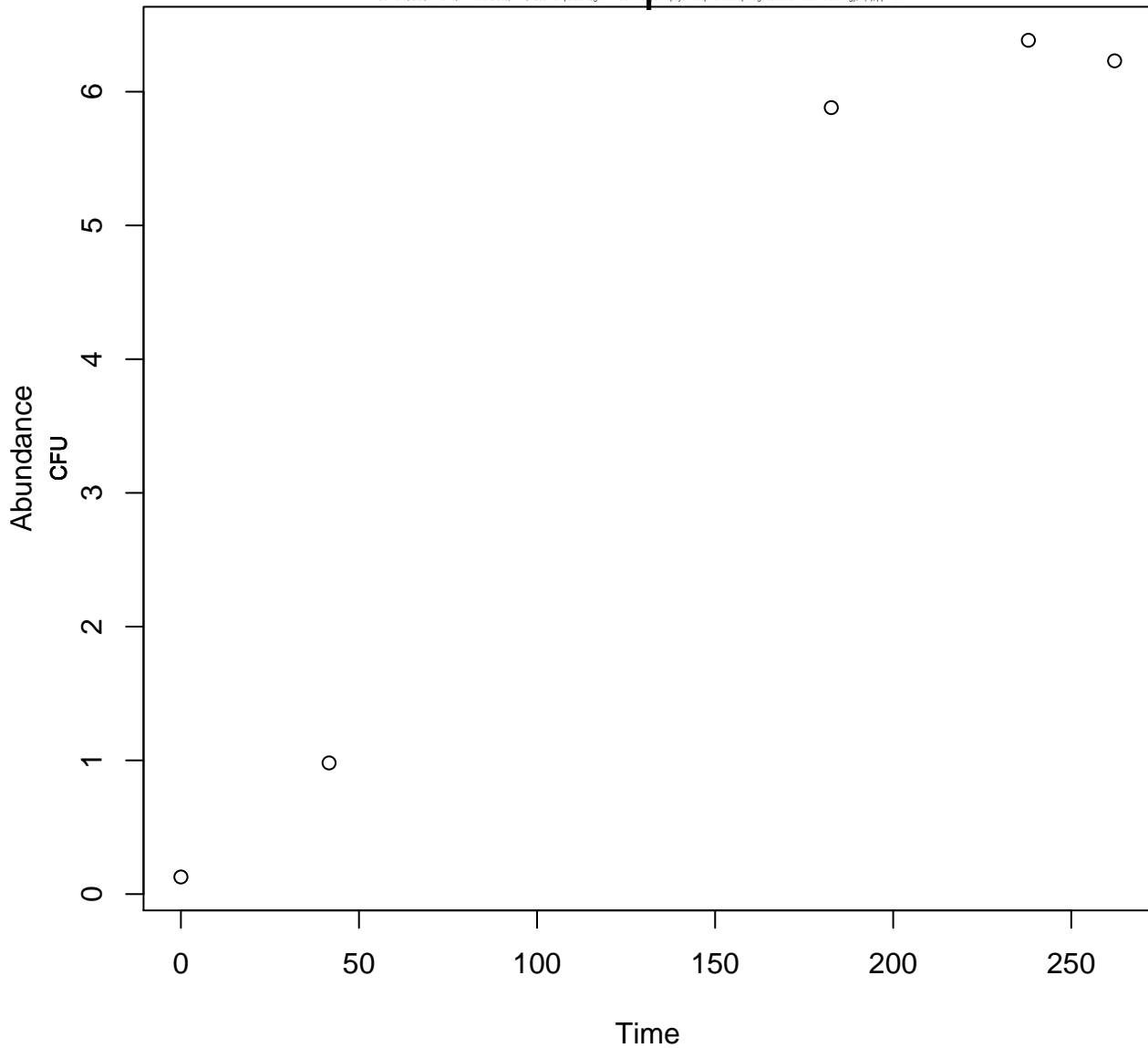
**Pseudomonas sp.**

**APT Broth**

**4**

**1**

Stannard, C.J., Williams, A.P. and Gibbs, P.A., 1985. Temperature/growth relationships for psychrotrophic food-spoilage bacteria. Food Microbiology, 2(2), pp.115-122.





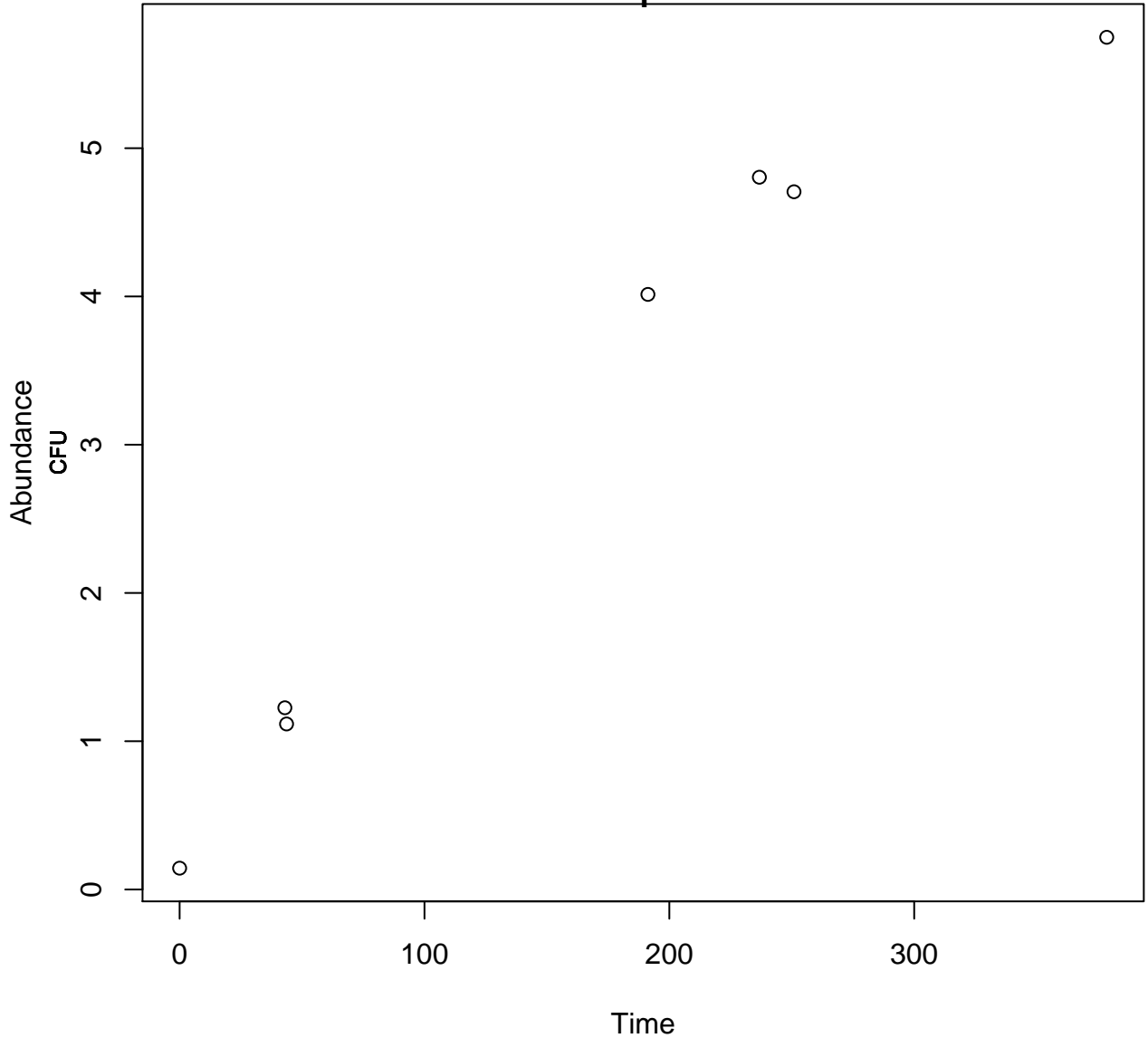
**Pseudomonas sp.**

**APT Broth**

**2**

**1**

Stannard, C.J., Williams, A.P. and Gibbs, P.A., 1985. Temperature/growth relationships for psychrotrophic food-spoilage bacteria. Food Microbiology, 2(2), pp.115-122.



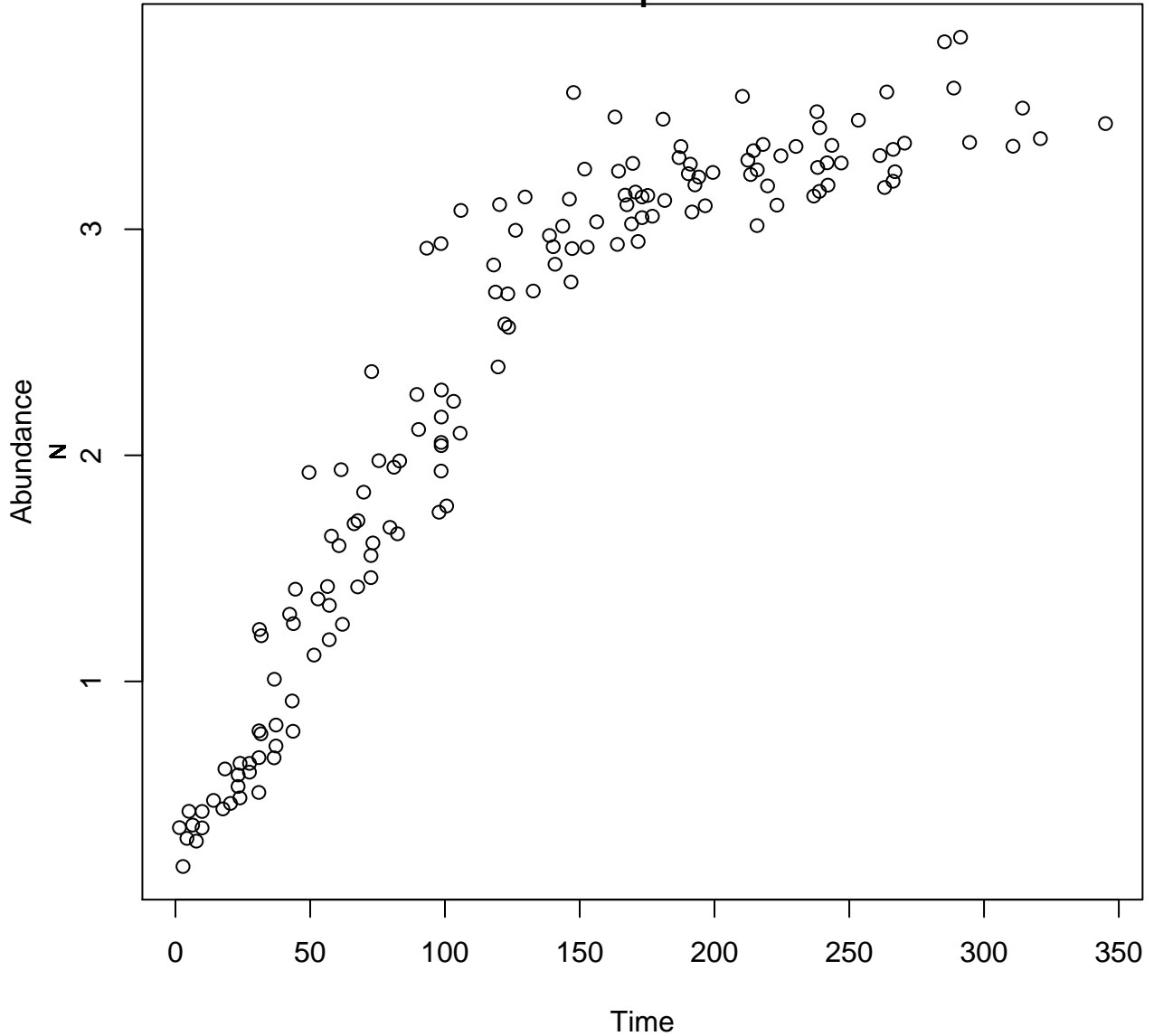
# Lactobacillus plantarum

MRS

10

1

Zwietering, M.H., De Wit, J.C., Cuppers, H.G.A.M. and Van't Riet, K., 1994. Modeling of bacterial growth with shifts in temperature. Appl. Environ. Microbiol., 60(1), pp.204-213.



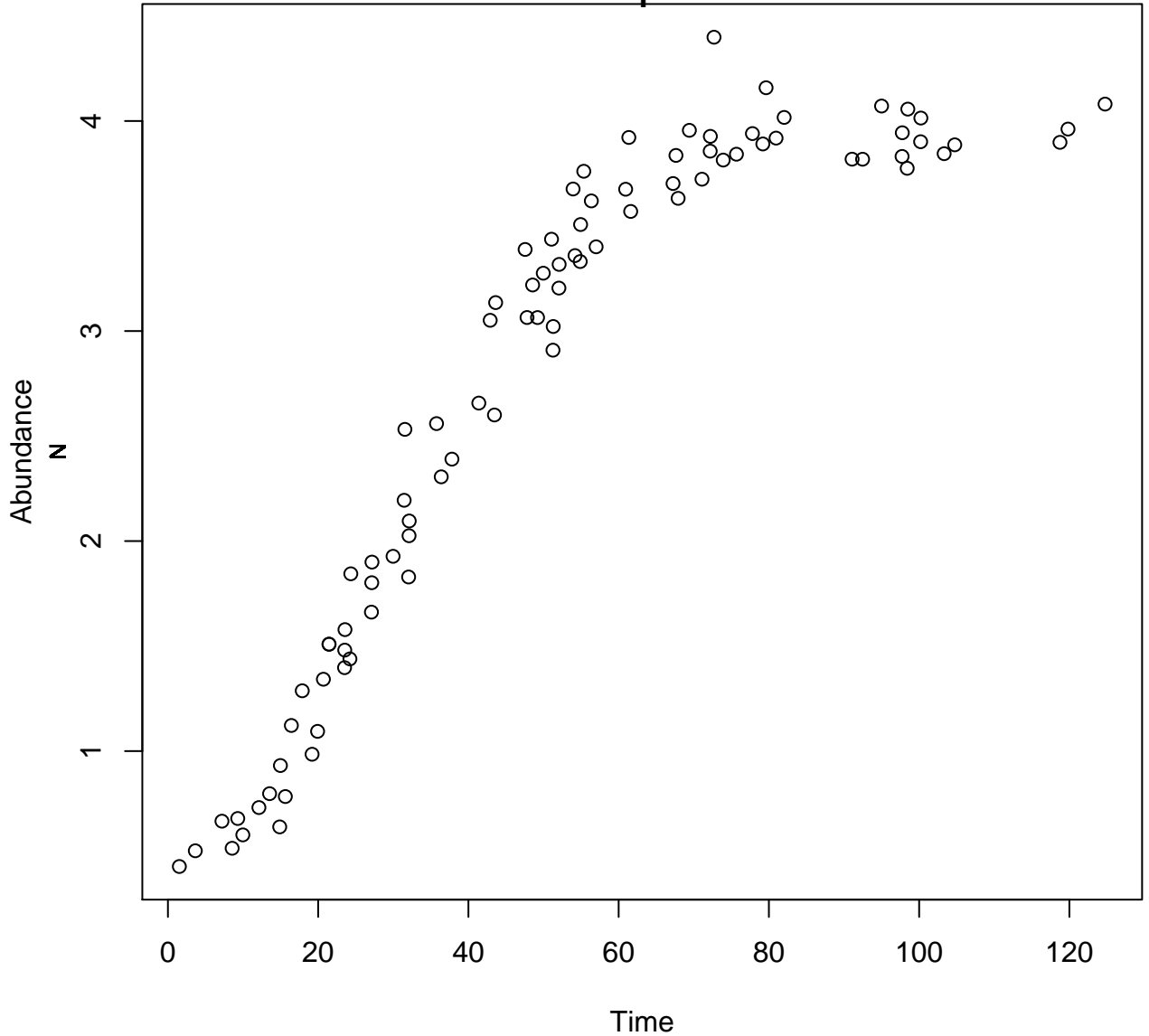
# Lactobacillus plantarum

MRS

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Zwietering, M.H., De Wit, J.C., Cuppers, H.G.A.M. and Van't Riet, K., 1994. Modeling of bacterial growth with shifts in temperature. Appl. Environ. Microbiol., 60(1), pp.204-213.



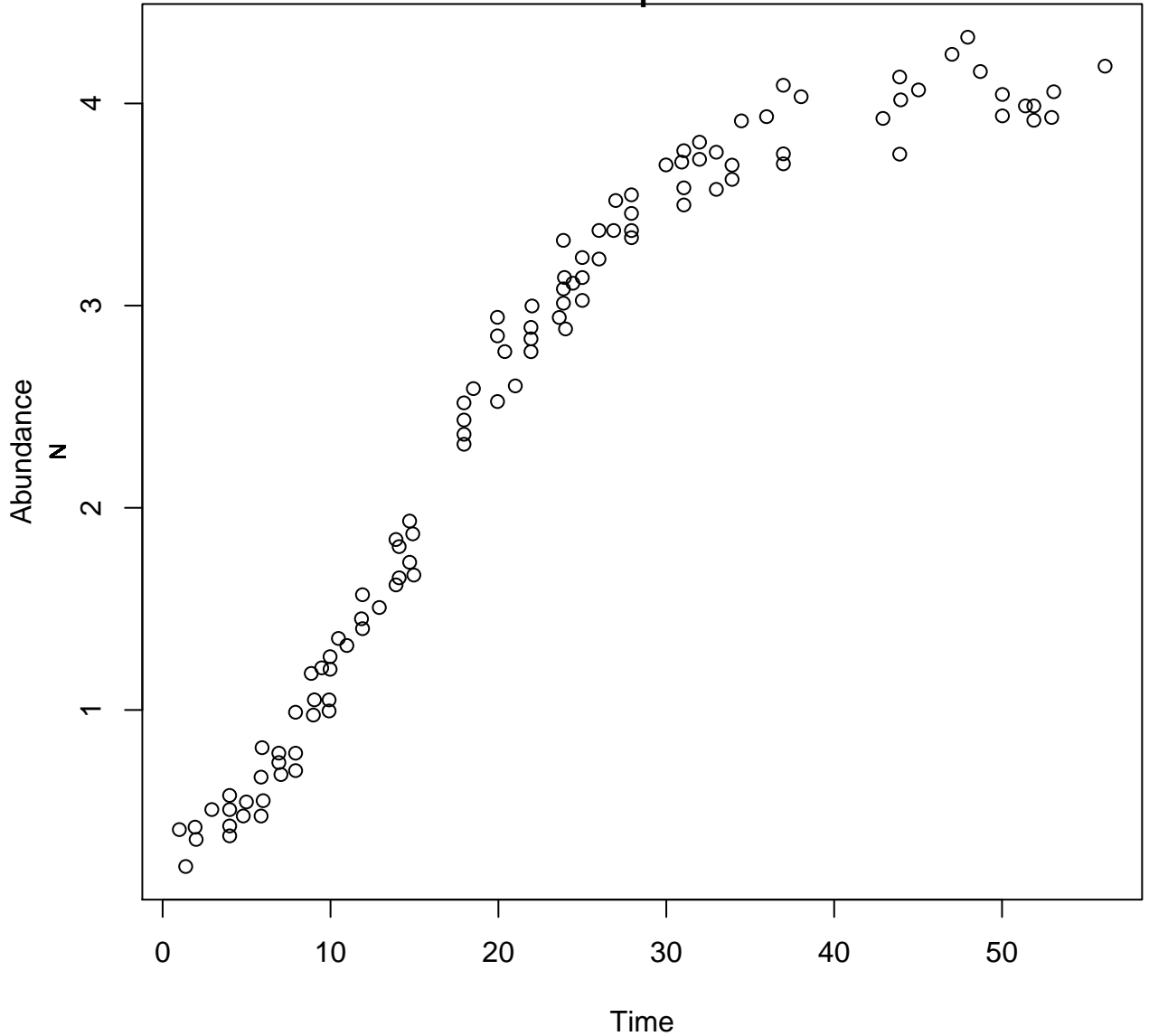
# Lactobacillus plantarum

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Zwietering, M.H., De Wit, J.C., Cuppers, H.G.A.M. and Van't Riet, K., 1994. Modeling of bacterial growth with shifts in temperature. Appl. Environ. Microbiol., 60(1), pp.204-213.



# Lactobacillus plantarum

MRS

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Zwietering, M.H., De Wit, J.C., Cuppers, H.G.A.M. and Van't Riet, K., 1994. Modeling of bacterial growth with shifts in temperature. Appl. Environ. Microbiol., 60(1), pp.204-213.

