

# Introduction to WGS in AMR surveillance – Day 5

Course offered by SEQAFRICA



24 February 2021

Pernille Nilsson

# Virtual Housekeeping



Please **turn off your cameras and microphones** – this will help with bandwidth and maximise audibility.



Do frequently **use Slack** to share comments and ask questions. Keep the chat constructive, respectful and on topic!



For Q&A's **use Slack to submit your questions!** Please upvote (give a thumbs-up) to the questions that you like.



The session is being **recorded for distribution to participants** as a post course resource as well as for future iterations of the course.

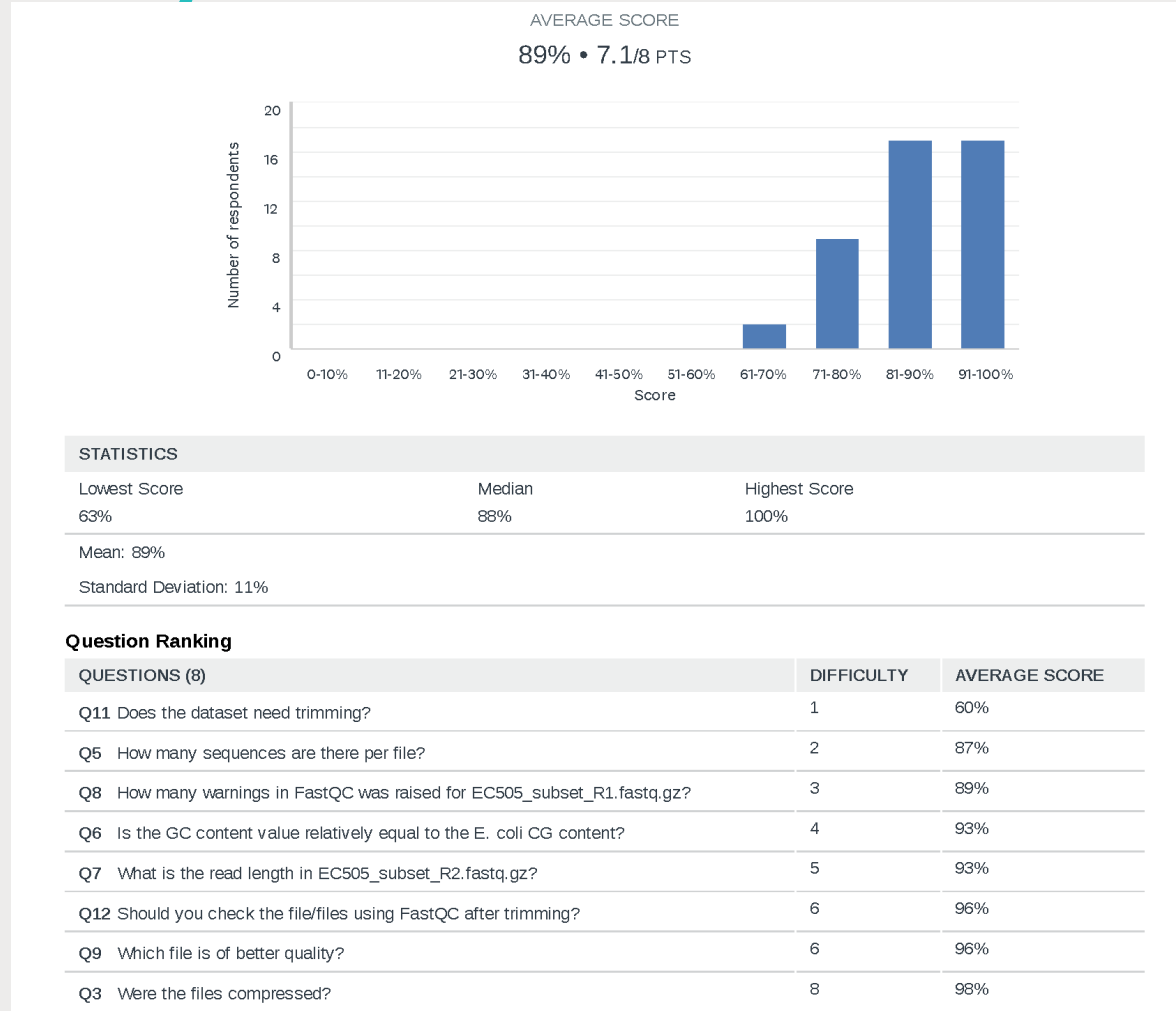
# Agenda

Wednesday 24<sup>nd</sup> February 09:00 – 12:00

## Day 5: Wednesday – 24 Feb 2021 – Results and Nagoya protocol Join Zoom for Day 5

08.45 – 09.00	<b>Joining the call</b> – Assistance will be provided at this time to help participants join	
09.00 – 09.15	<b>Welcome and Introduction (Live)</b>	
 09.15 – 10.15	Going through results from exercises <b>5E and 9E</b> (Live)	
10.15 – 10.30	<b>BREAK</b>	
 10.30 – 11.00	Going through results from exercises <b>10E and 11E</b> (Live)	
11.00 – 11.30	<b>BREAK</b>	
 11.30 – 12.15	[12] <b>The Nagoya protocol: An introduction</b>	Carolina Dos Santos Ribeiro (RIVM)
12.15 – 12.30	Q&A and Wrap-up (Live)	

# [5E] Basic Quality control of raw reads using FastQC

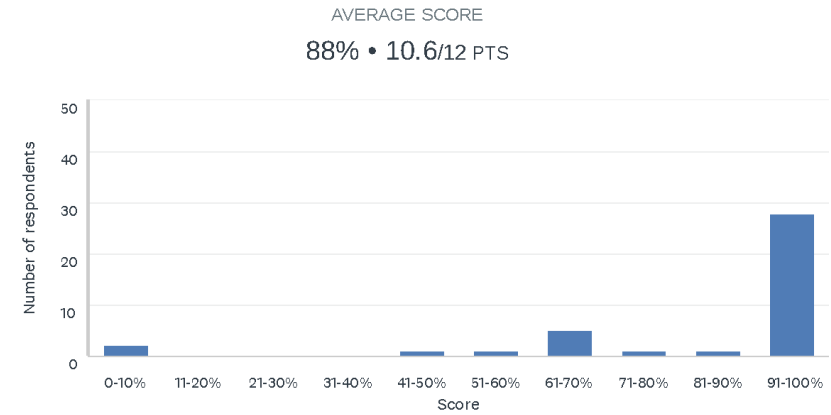


# [5E] Basic quality control of raw reads using FastQC

Mushal Allam (NICD, South Africa)



# [9E] Using online tools



#### STATISTICS

Lowest Score	Median	Highest Score
8%	100%	100%

Mean: 88%

Standard Deviation: 20%

#### Question Ranking

QUESTIONS (12)	DIFFICULTY	AVERAGE SCORE
Q12 Are there any AMR determinants (acquired AMR genes or mutations in existing genes)?	1	74%
Q6 Are there any AMR determinants (acquired AMR genes or mutations in existing genes)?	1	74%
Q18 Are there any AMR determinants (acquired AMR genes or mutations in existing genes)?	3	80%
Q24 Are there any AMR determinants (acquired AMR genes or mutations in existing genes)?	4	86%
Q20 What is the bacterial genus?	5	95%
Q21 What is the species?	5	95%
Q9 What is the species?	7	97%
Q8 What is the bacterial genus?	8	97%
Q3 What is the species?	8	97%
Q15 What is the species?	8	97%
Q14 What is the bacterial genus?	8	97%
Q2 What is the bacterial genus?	8	97%

# [9E] Using online tools

Anthony Smith (NICD, South Africa)





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**BREAK**





# [10E] Exercise in phylogeny

Erkison Odih (UI, Nigeria)



# [11E] Exercise in Phenotype based on genotype

Jette Sejer Kjeldgaard (DTU, Denmark)





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**BREAK**



# [12] The Nagoya protocol: An introduction

Carolina dos Santos Ribeiro (RIVM, The Netherlands)





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**Q&A**



# Agenda

Friday 26<sup>th</sup> February 09:00 – 12:45



Day 6: Friday – 26 Feb 2021– Genomic surveillance Join Zoom for Day 6		
08.45 – 09.00	<b>Joining the call</b> – Assistance will be provided at this time to help participants join	
09.00 – 09.15	<b>Welcome and Introduction (Live)</b>	
09.15 – 10.00	<p>[13] <b>Practical examples of genomic surveillance</b> Presentations from five different institutions:</p> <ol style="list-style-type: none"> <li><b>NICD, South Africa:</b> Genomic surveillance of enteric pathogens (Anthony Smith)</li> <li><b>FDA, USA:</b> Genomic and metagenomics based surveillance of AMR in the United States under the National Antimicrobial Resistance Monitoring System (NARMS) (Errol Strain)</li> </ol>	Intro by Anthony Smith (NICD, South Africa), Errol Strain (FDA, USA)
10.00 – 10.15	<b>BREAK</b>	
10.15 – 11.30	<p>[13] Practical examples of genomic surveillance cont.</p> <ol style="list-style-type: none"> <li><b>EFSA/DTU, Denmark:</b> How surveillance is set up.</li> <li><b>PGI, Africa Union/Africa CDC:</b> Surveillance of pathogens. (Sofonias K. Tessema)</li> <li><b>WHO:</b> The tricycle project (Jorge Raul Matheu Alvarez)</li> </ol>	Rene S. Hendriksen (DTU, Denmark), Sofonias K. Tessema (Africa Union, ACDC), Jorge Matheu (WHO)
11.30 – 11.45	<b>BREAK</b>	
11.45 – 12.30	<p>[14] <b>Panel Discussion: Genomic Surveillance (Live)</b></p> <p>Chair(s):</p> <p>Panel:</p> <ul style="list-style-type: none"> <li>Anthony Smith (NICD, South Africa)</li> <li>Errol Strain (FDA, USA)</li> <li>Sofonias K. Tessema (Africa Union/ACDC)</li> <li>Jorge Raul Matheu Alvarez (WHO)</li> </ul>	
12.30 – 12.45	<b>Concluding remarks and close (Live)</b> Course evaluation survey (SurveyMonkey)	Pernille Nilsson and Rene S. Hendriksen (DTU)

## Contact us for more information



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[antimicrobialresistance.dk/seqafrica.aspx](http://antimicrobialresistance.dk/seqafrica.aspx)



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# Thank you



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