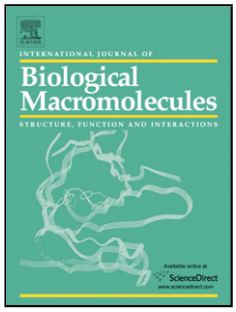

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Next Generation Sequencing for the investigation of an Outbreak of *Salmonella*Schwarzengrund in Nanjing, China

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Abstract

Subject: *Salmonella*Schwarzengrund is most frequently isolated from poultry meat and can cause human infections. *S.* Schwarzengrund was isolated from diarrheal patients in a food poisoning event in Nanjing, China. Methods: Three strains isolated from patients were microbiologically confirmed as *S.* Schwarzengrund. *Salmonella* strains from spiced donkey meat were also confirmed as *S.* Schwarzengrund. Epidemiology investigation showed evidence of a correlation between the consumption of spiced donkey meat and those cases. Pulsed field gel electrophoresis, antibiotic susceptibility test and next generation sequencing (NGS) were employed to investigate this food poisoning event. Resuts: The 3 strains isolated from patients and the strain isolated from the spiced donkey meat showed same results in PFGE, antibiotic susceptibility test and no SNPs were observed between these 4 strains in NGS analysis. Discussion: NGS data could be used in the confirmation of an outbreak and in the tracing of contamination. However, this standard of defining an outbreak with NGS remained a challenge in practice. And the NGS data should be used in combination with other data in epidemiological investigation.

Introduction:

*Salmonella*Schwarzengrund is most frequently isolated from poultry meat and can cause human infections. *S.* Schwarzengrund was isolated from diarrheal patients in a food poisoning event in Nanjing, China.

Methods:

Three strains isolated from patients were microbiologically confirmed as *S.* Schwarzengrund. *Salmonella* strains from spiced donkey meat were also confirmed as *S.* Schwarzengrund. Epidemiology investigation showed evidence of a correlation between the consumption of spiced