**Dr. William Lawler,** M.D., F.R.C.Path.

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August 13th, 2017

Mr. A. MacLeod,
Senior Procurator Fiscal Depute,
Crown Office and Procurator Fiscal Service,
Procurator Fiscal's Office,
Cameronian House,
3/5, Almada Street,
HAMILTON
ML3 0HG.

Dear Mr. MacLeod,

**Re: Sheku Ahmed Tejan BAYOH (deceased)**

Thank you for inviting me to comment further upon some of the pathological aspects of this case and for sending to me copies of the recent additional statement from Professor Anthony FREEMONT (dated 03.07.17, with an attached appendix in PowerPoint format, and with three papers also attached) and the report from Professor Michael EDDLESTON (dated 02.06.17). I will consider each separately.

## a) Professor FREEMONT

Since submitting his previous report (dated 03.05.17), Professor Freemont sought further information in relation to this case, and he requested additional, specific histopathological and immunochemical stains of the retained tissues from the fracture site. His more recent report incorporates this information, his interpretations of the special stains received and his consequent conclusions.

Although I readily accept that I am not a specialised osteoarticular pathologist, I do have a career background of diagnostic histopathology – albeit a long time ago! I can therefore understand, and appreciate the significance of, the various detailed and technical histological features which Professor Freemont describes in his recent report and which he very clearly illustrates in its extremely helpful PowerPoint appendix.

Having now compared Professor Freemont's two reports, it seems to me that the further, special stains have reinforced his opinion that the deceased's isolated left first rib fracture was sustained during life, but he has now modified slightly (but, in the context of this particular case, very importantly) his views about the timing of this fracture. Thus, he now opines that "it occurred definitely within 24 hours of, probably within 6 hours of, and almost certainly no less than two hours before, death". He remains of the view that "the most plausible cause of the fracture is an indirect injury such as falling on an outstretched arm or a blow to or fall onto the shoulder".

**COMMENTS**: At pages 23-24 of my previous report (dated 22.05.17), I noted Professor Freemont's original observations and conclusions, and at pages 27-28, under point 17, I discussed the difficulties which I then had in relation to interpretations of the deceased's isolated posterior left first rib fracture. For ease of reference, I think that it would be most helpful if I were to reproduce here, verbatim, what I previously wrote under point 17:-

*"I confess that I find interpretations in relation to the deceased's isolated posterior left first rib fracture very difficult. I am impressed by the fact that it appears to have been associated with very little (if any) local bruising – probably the main reason why it was not found during the post mortem examination on 04.05.15. This would suggest to me that it was likely to have occurred after the deceased's circulation had ceased – i.e. during resuscitation attempts or even at some later stage. I am, however, aware of Professor Freemont's opinion that, "on balance", it occurred in life and probably within six hours of death.*

*From the paper provided by Professor Freemont (Sakellaridis et al, British Journal of Sports Medicine, 2004) I note that first rib fractures may occur as a result of direct external trauma, indirect trauma (as from falling onto an outstretched arm, hyperabduction of the arm, or a blow to the shoulder) or as a fatigue/stress fracture. More specifically, however, I also note that* ***isolated*** *first rib fractures are rarely the result of direct external violence because, unlike all the other ribs, the first is deeply placed and*

*protected on all sides by the shoulder girdle and by the regional musculature; consequently, localised direct blunt force is likely to be associated with other fractures (e.g. clavicle, scapula and other ribs).*

*I can, therefore, understand why Professor Freemont concluded that "the most plausible cause [for the deceased's isolated first rib fracture] is an indirect injury such as falling on an outstretched arm or a blow to or fall onto the shoulder away from the bone".*

*In my opinion, the importance of this detailed consideration of the deceased's isolated first rib fracture is because I think it very unlikely to be relevant when considering the direct forces applied by one or more of the police officers to the upper part of the back of the deceased's chest during his restraint."*

In the light of my previously expressed views and Professor Freemont's recent additional report, I would make the following three observations:-

1. The macroscopic photograph provided to Professor Freemont and included in his PowerPoint appendix at Figure 1 (which I had not previously seen) does appear to show some bruising associated with the fracture, although the extent thereof cannot be determined, especially as there is no scale on the image.

2. The special stains requested by Professor Freemont, and particularly that for glycophorin A, point very strongly to there being genuine ante mortem haemorrhage at the fracture site.

3. I find Professor Freemont's image of the loss of osteocytes adjacent to the fracture line (Figure 3 of his PowerPoint appendix) very persuasive. I note the comments in his report that "osteocyte necrosis is a counterintuitive finding in that it occurs in life and not in death, even with decomposition" and that this necrosis "can be visualised possibly as early as 2 hours after onset, probably by 6 hours and definitely by 24 hours".

It therefore seems to me that Professor Freemont has now provided good evidence to show not only that the deceased's isolated left first rib fracture was sustained during life, but also that it must have occurred at least two hours (and probably longer) before his death. If so, then it must mean, firstly, that the fracture must have been present prior to the deceased's initial contact with police officers on the morning of 03.05.15; secondly, that it could not have been caused at any stage during the restraint; and, thirdly, that it was not a 'resuscitation artefact'.

Finally, in respect of my previous report where, in the final paragraph of point 17 on page 28, I wrote "*the importance of this detailed consideration of the deceased's isolated first rib fracture is because I think it very unlikely to be relevant when considering the direct forces applied by one or more of the police officers to the upper part of the back of the deceased's chest during his restraint*", I now believe, in the light of Professor Freemont's further statement, that the rib fracture is, in reality, not at all relevant.

## b) Professor EDDLESTON

Professor Michael Eddleston is a consultant clinical toxicologist, and he has been asked to consider the possible effects of the drugs taken by the deceased prior to his death.

In his report, he makes the following four points which I, from my perspective, consider to be relevant:-

1. He agrees with others that the deceased was suffering from some form of "psychostimulant psychosis" which he prefers to refer to as "drug-induced psychosis" or "stimulant or sympathomimetic drug-induced psychosis".

2. Having considered the effects of alpha-PVP and MDMA, and, in particular, their likelihoods of causing psychosis, Professor Eddleston concludes that "it seems likely that alpha-PVP was primarily responsible for SB's drug induced psychosis", although he adds that "it is possible that exposure to MDMA increased the risk of drug-induced psychosis".

3. When considering restraint, Professor Eddleston clearly states that "during restraint, stimulant drug users are at risk of dysrhythmias such as ventricular fibrillation".

4. Towards the end of his report, Professor Eddleston says that "psychosis is a well-recognised complication of stimulant drug use with a poor prognosis when public safety requires physical restraint without medical support".

**COMMENTS**: Although Professor Eddleston's area of expertise is significantly different from mine, I found his report very interesting.

Overall, I do not think that it affects my previously stated thoughts either about the deceased's condition prior to, and at the time of, his encounter with the police, or about the role of the drugs which he had taken in his subsequent death.

Yours sincerely,

WILLIAM LAWLER O.B.E., M.D., F.R.C.Path., M.F.F.L.M.
Consultant Forensic Pathologist
Formerly Home Office Pathologist.

# DISCLOSURES

## DECLARATION

I am an expert in forensic pathology, and I have been requested to provide a report. I confirm that I have read guidance contained in a booklet entitled "*Disclosure: Experts' Evidence and Unused Material*", which details my role and documents my responsibilities in relation to revelation as an expert witness. I have followed the guidance and recognise the continuing nature of my responsibilities of revelation. In accordance with my duties of revelation, as documented in the guidance booklet, I

(a) confirm that I have complied with my duties to record, retain and reveal material in accordance with the Criminal Procedure and Investigations Act, 1996, as amended;

(b) have compiled an Index of all material. I will ensure that the Index is updated in the event I am provided with or generate additional material;

(c) that in the event of my opinion changing on any material issue, I will inform those instructing me as soon as reasonably practicable and give reasons.

## EXPERT WITNESS SELF CERTIFICATION

I am aware of my responsibilities as an expert witness to reveal to the Court any information that might undermine my evidence.

I hereby declare that:-

1. I have never been convicted of, cautioned for, or received a penalty notice for any criminal offence other than minor traffic offences.
2. there are no proceedings pending against me in any criminal or civil court.
3. I am not aware of any adverse finding by a judge, magistrate or coroner about my professional competence or credibility as a witness.
4. I have never been the subject of any adverse findings by a professional or regulatory body.
5. there are no proceedings, referrals or investigations pending against me that have been brought by a professional or regulatory body.
6. I am not aware of any other information that I think may adversely affect my professional competence and credibility as an expert witness.