

**Indexed as: Ontario (College of Physicians and Surgeons of Ontario) v. Jamal,  
2018 ONCPSD 21**

**THE DISCIPLINE COMMITTEE OF THE COLLEGE  
OF PHYSICIANS AND SURGEONS OF ONTARIO**

**IN THE MATTER OF** a Hearing directed by  
the Inquiries, Complaints and Reports Committee of the College of Physicians and Surgeons of  
Ontario pursuant to Section 26(1) of the **Health Professions Procedural Code**  
being Schedule 2 of the *Regulated Health Professions Act, 1991*,  
S.O. 1991, c. 18, as amended.

**B E T W E E N:**

**THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO**

**- and -**

**DR. ABIDA SOPHINA JAMAL**

**PANEL MEMBERS:**  
**DR. P. CHART (CHAIR)**  
**MAJOR A.H. KHALIFA**  
**DR. D. PITT**  
**MR. P. PIELSTICKER**  
**DR. V. MOHR**

**COUNSEL FOR THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO:**

**MS A. BLOCK**

**COUNSEL FOR DR. JAMAL:**

**MS J. A. McKENDRY**  
**MR. M. J.P. O'BRIEN**

**INDEPENDENT COUNSEL FOR THE DISCIPLINE COMMITTEE:**

**MR. R. COSMAN**

**Hearing Date:** March 6, 2018  
**Decision Date:** March 6, 2018  
**Release of Written Reasons:** May 1, 2018

## **DECISION AND REASONS FOR DECISION**

The Discipline Committee (the “Committee”) of the College of Physicians and Surgeons of Ontario heard this matter at Toronto on March 6, 2018. At the conclusion of the hearing, the Committee released a written order stating its finding that the member committed an act of professional misconduct. The Order set out the Committee’s penalty and costs order with written reasons to follow.

### **THE ALLEGATIONS**

The Notice of Hearing alleged that Dr. Abida Sophina Jamal committed an act of professional misconduct:

1. under paragraph 1(1)2 of Ontario Regulation 856/93, in that she has failed to maintain the standard of practice of the profession;
2. under paragraph 1(1)33 of Ontario Regulation 856/93 made under the *Medicine Act, 1991* (“O. Reg. 856/93”), in that she has engaged in an act or omission relevant to the practice of medicine that, having regard to all the circumstances, would reasonably be regarded by members as disgraceful, dishonourable or unprofessional; and
3. under paragraph 1(1)34 of O. Regulation 856/93, in that she has engaged in conduct unbecoming a physician.

### **RESPONSE TO THE ALLEGATIONS**

Dr. Jamal admitted the allegations in the Notice of Hearing.

## **THE FACTS**

The following facts were set out in the Agreed Statement of Facts, which was filed as an exhibit and presented to the Committee:

### **PART I - FACTS**

#### **A. Background**

##### **(i) Dr. Abida Sophina Jamal**

1. Dr. Abida Sophina Jamal (“Dr. Jamal”) is a 51 year-old physician who received her certificate of registration authorizing independent practice from the College of Physicians and Surgeons of Ontario (the “College”) on June 17, 1991.
2. In 2002, she completed her PhD at the University of Toronto in the field of clinical epidemiology of osteoporosis, with specific interest in the use of nitrate drug treatment.
3. Between 2007 and 2015, Dr. Jamal held an appointment to the Active Staff at Women’s College Hospital (“WCH”) as well as an appointment as a Scientist at WCH’s Research Institute. She was also appointed as an Associate Professor in the Department of Medicine, University of Toronto. In addition to her research activities, she practiced endocrinology at WCH.
4. Dr. Jamal resigned from WCH in 2015. She continues to practice endocrinology in the community in an office-based setting in Toronto.

##### **(ii) Overview of Professional Misconduct**

5. As set out in further detail below, on October 9, 2015, WCH concluded an investigation into three different research studies that had been conducted by Dr. Jamal: the “JAMA Study”, the “Sclerostin Study”, and the “NABT Study”, defined below.

6. The facts set out below relate to Dr. Jamal's conduct in her research in these three studies and her conduct in the investigation that ensued.
7. WCH found, and Dr. Jamal admits, that in respect of these studies, and in respect of the WCH investigation, Dr. Jamal engaged in research misconduct including:
  - Dr. Jamal intentionally manipulated study data in each of the JAMA Study, the Sclerostin Study and the NABT Study, with the intention of supporting the underlying study hypothesis in each case;
  - Dr. Jamal made wholly unjustified and completely inappropriate allegations against her Research Associate;
  - Dr. Jamal systematically altered patient records to match previously altered datasets;
  - Dr. Jamal deleted relevant evidence after she had knowledge of the investigation;
  - Dr. Jamal failed to maintain and properly archive raw data;
  - Dr. Jamal failed to make raw data available to collaborators;
  - Dr. Jamal intentionally represented falsified and/or fabricated data as raw data;
  - Dr. Jamal used falsified results from one study to apply, obtain and use funding for the follow-up Sclerostin and NABT studies.

**(iii) Dr. Jamal's Research in Osteoporosis**

8. Prior to the investigation that gave rise to these proceedings, Dr. Jamal had been involved in the publication of study protocols and research investigations related to the use of nitrate drug treatment in osteoporosis.

**(a) The JAMA Study**

9. Dr. Jamal was the Principal Investigator in a study entitled "Effect of Nitroglycerin Ointment on Bone Density and Strength in Postmenopausal Women: A Randomized Trial". This study was published by Dr. Jamal, Dr. Richard Eastell, MD, University of Sheffield and Dr. Stephen Cummings MD, California Pacific Medical Center Research Institute ("CPMCRI"), among others, in the Journal of the American Medical Association ("JAMA") on February 23, 2011 (the "JAMA Study"). A copy of the JAMA Study is attached at Tab 1 [to the Agreed Statement of Facts].

10. The JAMA Study was a double blind placebo-controlled randomized control trial designed to determine if nitroglycerin increases lumbar spine bone mineral density and to evaluate changes in bone mineral density. The JAMA Study concluded that among postmenopausal women, nitroglycerin ointments modestly increased bone mineral density and decreased bone resorption.
11. The JAMA Study was funded by the Canadian Institute of Health Research (“CIHR”), in the amount of \$536,796.00. The study involved the participation of 400 women in the run-in phase and ultimately enrolled 243 postmenopausal women between the ages of 50 and 80.
12. As Principal Investigator, Dr. Jamal had full access to all of the data in the study and took responsibility for the integrity of and the accuracy of the data analysis.

**(b) The Sclerostin Study**

13. Following the publication of the JAMA Study in 2011, a subgroup of subjects were included in a follow-up study conducted by Dr. Jamal and others.
14. Its purpose was to examine the possible role of sclerostin, a negative regulator of bone turnover, as an underlying mechanism for the effects of nitrates on osteoporosis as had been previously reported in the JAMA study (the “Sclerostin Study”).
15. A manuscript was prepared and submitted to a journal but was rejected. Dr. Jamal was among the co-authors of this study. It concluded that nitroglycerin substantially increases bone mass in postmenopausal women by decreasing sclerostin production. A copy of the unpublished manuscript is attached at Tab 2 [to the Agreed Statement of Facts].

**(c) The NABT Study**

16. On October 25, 2013, Dr. Cummings, in collaboration with Dr. Jamal and others, submitted a planning grant application to the National Institutes of Health (“NIH”) entitled

“The NO Fracture Planning Grant”. Building on the results of the JAMA Study, Dr. Jamal and her collaborators sought funding for a large scale randomized control trial to test the efficacy and safety of daily nitroglycerin treatment to prevent osteoporotic fractures (the “Fracture Trial”).

17. The results of the JAMA study are quoted in the grant application as part of the rationale for the Fracture Trial.
18. As a preliminary step, Dr. Jamal and others commenced a study to establish the appropriate formulation and dose of nitrate treatment for use in the anticipated Fracture Trial. This study is known as the “Nitrates and Bone Turnover (NABT): trial to select the best nitrate preparation (the “NABT Study”). A copy of the Study Protocol for the NABT Study is attached at Tab 3 [to the Agreed Statement of Facts].
19. The NABT Study was conducted between 2012 and 2014. The study was funded by CIHR in the amount of \$263,914, in addition to other sources of funding. The study enrolled 420 women in the run-in phase and ultimately enrolled 210 women aged 50 or older.
20. Dr. Jamal is identified as the Primary Investigator in the NABT Study Protocol.
21. As set out in further detail below, it was in the course of the NABT Study that Dr. Jamal’s research misconduct came to light.

**B. Concerns Regarding the Integrity of Data Arose in the NABT Study**

**(i) The Initial NABT Data Analysis Conducted by Dr. Jamal Showed Favorable Results**

22. In or around July 2014, the collaborators in the NABT Study commenced the process of collecting and analyzing data. Serum and urine samples were analyzed by the University of Sheffield (the institution affiliated with Dr. Eastell) and the data derived from the samples was sent to Toronto for statistical analysis.

23. Dr. Jamal's role was to complete the statistical analysis of the data collected in the NABT Study. While Dr. Jamal was assisted by her Research Associate in data entry tasks, her Research Associate was not trained to analyze data. It was Dr. Jamal's sole responsibility to analyze data and run the statistical analysis.
24. On August 18, 2014, Dr. Jamal's Research Associate completed the data entry and provided Dr. Jamal with data files to use in her statistical analysis.
25. Between August 20 and 25, 2014, Dr. Jamal generated a statistical analysis that she shared with her collaborators. Dr. Jamal's statistical analysis supported the NABT's Study hypothesis, namely that nitrates promote bone formation. The results were consistent with the earlier JAMA Study. As was revealed in the subsequent WCH investigation, unbeknownst to her colleagues and collaborators, Dr. Jamal had manipulated the data and falsified these study results.

**(ii) Dr. Jamal's Analysis Raised Suspensions**

26. On September 13, 2014, Dr. Jamal shared the favorable results of the statistical analysis on the NABT Study to a small group at the American Society for Bone Mineral Research ("ASBMR") Conference in Houston. The group included Dr. Jamal's co-collaborators, Drs. Eastell and Cummings.
27. Dr. Eastell, however, could not understand the results presented by Dr. Jamal, as one aspect was unexpected and not in keeping with the other results from a biological perspective.
28. As a result, on September 14, 2014, Dr. Eastell asked Dr. Jamal to provide him with the data she relied on so that he could examine it.

**(iii) Dr. Eastell's Analysis Did Not Match Dr. Jamal's**

29. Further to Dr. Eastell's request, on October 8, 2014, Dr. Jamal purported to send the data files that had been created by her Research Associate the previous August on the premise

that this was the data that she relied on to conduct her statistical analysis. In fact, the WCH's investigation revealed that the files Dr. Jamal sent were not what her Research Associate had prepared the previous August. Rather, the files Dr. Jamal sent contained the manipulated data that Dr. Jamal relied on in her statistical analysis. Dr. Jamal created these files on October 8, 2014, moments before sending them to Dr. Eastell.

30. Had Dr. Jamal sent Dr. Eastell the files prepared by her Research Associate the previous August, Dr. Eastell would have immediately seen that the data did not support the results Dr. Jamal had circulated to collaborators and presented at the ASBMR meeting the previous month.
31. Ultimately, Dr. Eastell conducted his own statistical analysis, relying on data directly from the source (i.e., assays conducted at the University of Sheffield). As set out in his email to Dr. Jamal and Dr. Cummings dated December 9, 2014 at Tab 4 [to the Agreed Statement of Facts], his results showed no difference the between treatment groups compared with the placebo controls, a significant departure from Dr. Jamal's results. Dr. Eastell's results did not support the study hypothesis.

**(iv) Dr. Jamal Attempted to Retract her Analysis and Avoid Detection**

32. On December 10, 2014, the Research Associate, concerned with the discrepancy between Dr. Eastell's results and Dr. Jamal's, requested that Dr. Jamal send her a copy of the data she had sent to Dr. Eastell in October so she could re-check her data entry. She was concerned she may have made mistakes in her data entry, and that this may have impacted Dr. Jamal's analysis.
33. Dr. Jamal purported to do this, but instead sent her Research Associate the data her Research Associate had prepared so that she would not see that Dr. Jamal had sent Dr. Eastell a different set of data. Had she actually provided her Research Associate with what she had provided to Dr. Eastell, her Research Associate may have detected that Dr. Jamal altered the data.



34. The Research Associate reviewed the data and noted that she had made 16 typographical data-entry errors (in a dataset containing over 1000 reported values). The Research Associate corrected these typographical errors and provided a corrected spreadsheet to Dr. Jamal the same day. These typographical errors would not have generated the statistical analysis originally prepared by Dr. Jamal in August 2014 and shared with her collaborators and colleagues that Fall.
35. Dr. Jamal then purported to “re-enter” the data on her own. She generated a new statistical analysis and sent her results to Dr. Eastell and Dr. Cummings. She did not copy her Research Associate. In her email, attached at Tab 5 [to the Agreed Statement of Facts], she represented that she re-entered the data provided from the source (the University of Sheffield) and confirmed her re-analysis was in line with Dr. Eastell’s. She attached a word document with a statistical analysis. She pointed to her Research Associate as the source of the discrepancy between her initial analysis and Dr. Eastell’s.
36. Dr. Eastell continued to try to understand the difference between his analysis which did not support the study hypothesis and the one originally conducted by Dr. Jamal which did support the study hypothesis. He examined the data from various sources including the original data derived from the serum and urine samples at the University of Sheffield and the data subsequently provided to him by Dr. Jamal.
37. In an email dated January 13, 2015 to Dr. Cummings and Dr. Jamal, attached at Tab 6 [to the Agreed Statement of Facts], Dr. Eastell explained that on his review, with the assistance of his colleagues, it appeared that there had been systematic changes to the data as it pertained to certain treatment groups, but no changes to the placebo group. He concluded:
- I am worried the changes could have been made deliberately as I can’t think of another explanation.
38. Dr. Jamal replied to Dr. Eastell later that day, indicating that she agreed with Dr. Eastell.

She then sought to deflect blame, advising her collaborators that “the spread sheet [she] sent was based on [her Research Associate’s] data” (Tab 7 [to the Agreed Statement of Facts]).

**(v) Dr. Jamal Deflected Blame to her Research Associate**

39. On January 14, 2015, following Dr. Eastell’s revelation that deliberate changes had been made to the data, Dr. Jamal, Dr. Cummings and Dr. Eastell participated in a videoconference. The discussion focused on Dr. Jamal’s concern that *the Research Associate* had changed the data and about how Dr. Jamal should approach the matter with her Research Associate.
40. On January 22, 2015, Dr. Jamal sent Dr. Cummings and Dr. Eastell a draft letter she had prepared to send to all those who had participated in the discussion about the NABT Study results at the ASBMR conference. In the draft letter, Dr. Jamal acknowledged that the previous data that she had shared was “incorrect”, that the reanalysis demonstrated no relationship between bone turnover markers and nitrates, and that there had been “systematic modifications” to the data.
41. In her email, attached at Tab 8 [to the Agreed Statement of Facts], Dr. Jamal advised Dr. Cummings and Dr. Eastell that she had spoken with her VP of Research about the concerns regarding the conduct of her Research Associate. This is untrue. Dr. Jamal mentioned nothing to the VP of Research.

**(vi) Concern with NABT Research Prompted Dr. Jamal’s Collaborators to Make Inquiries about the JAMA Data**

42. After concerns were raised about the NABT data in late 2014 and early 2015, Dr. Cummings and Dr. Eastell discussed the need to confirm the published JAMA results. It seemed unlikely that the JAMA results would differ so significantly from the NABT results. Given that Dr. Cummings, Dr. Jamal and Dr. Eastell had sought funding for a planning grant for a large scale clinical trial (the NIH NO Planning Grant) based on the JAMA results, Dr. Cummings wanted to confirm the JAMA analysis. Accordingly, he

requested that Dr. Jamal provide the raw data.

43. On January 20, 2015, Dr. Jamal wrote to Dr. Cummings and Dr. Eastell claiming she had some “bad news” regarding the data sources for the JAMA paper. She advised that none of original/raw data remained available - it had either been lost or destroyed.
44. On January 27, 2015, Dr. Jamal emailed Dr. Cummings advising that she, in fact, did locate some raw data for the JAMA Study. She attempted to discourage any further investigation into the JAMA data stating (Tab 9 [to the Agreed Statement of Facts]):  
 ...Richard, I sensed your frustration yesterday and I am equally frustrated unfortunately however that is the issue.  
 My sense, as I have told Steve is given the negative BTM data, the pragmatic limitations of headache and the inability to redo the JAMA analysis that we should not pursue this personally I will not be able to pursue this any further.
45. Dr. Jamal’s misconduct in relation to her collaborators’ requests for the raw JAMA data, and in relation to the JAMA Study are set out in section F below.

## **C. Investigation Into Research Misconduct Ensued**

### **(i) Dr. Jamal’s Collaborators File a Research Complaint**

46. On February 25, 2015, the Scientific Director at the CPMCRI, the institution affiliated with Dr. Cummings, lodged a complaint against Dr. Jamal with the Research Oversight and Compliance Department of the University of Toronto. The complaint requested an investigation into, among other things, whether the data in the NABT Study had been intentionally manipulated and if so, by whom, and whether the raw data for the JAMA Study exists. A copy of the complaint is attached at Tab 10 [to the Agreed Statement of Facts].
47. Pursuant to the University of Toronto’s *Framework to Address Allegations of Research Misconduct*, a preliminary inquiry was conducted (the “U of T Inquiry”).

48. In a report dated May 5, 2015 (attached at Tab 11[to the Agreed Statement of Facts]), the U of T Inquiry concluded that an investigation was warranted.

**(ii) Dr. Jamal Lied in the Inquiry**

49. Throughout the U of T Inquiry, Dr. Jamal falsely maintained she played no role in the manipulation and fabrication of the study data. She continued to deflect blame to her Research Associate and sought to avoid detection. For example, in her response dated April 5, 2015, attached at Tab 12 [to the Agreed Statement of Facts], she stated:

During the following week, I spoke to [my Research Associate] and asked her about the NABT data. I indicated that the Revised Data that she had entered into Excel and which I had analyzed and presented to the ASBMR Group differed from the Original Data sent to us by Dr. Eastell, I asked her if she knew how this could have occurred. [My Research Associate] had no explanation for this, and told me that any mistakes she made in the re-entry of the data were entirely inadvertent.

...In light of the information I was given about [my Research Associate] notwithstanding her insistence that the errors she made were inadvertent, I felt I had to take steps to exclude her from work in respect of which similar errors could occur. ....

50. In a subsequent response, attached at Tab 13 [to the Agreed Statement of Facts], Dr. Jamal directly blamed her Research Associate:

....If the data was indeed manipulated intentionally, the only person who could have engaged in such conduct was [my Research Associate].

51. In her submission to the U of T Inquiry, Dr. Jamal purported to include the data sets prepared by her Research Associate. The files she provided to the U of T Inquiry were, in fact, the files Dr. Jamal created on the morning of October 8, 2014, shortly before she sent them to Dr. Eastell (and as subsequently determined, reflected the data she had

manipulated). Dr. Jamal made this statement to deliberately mislead the Inquiry and to falsely and deliberately implicate her Research Associate.

52. Dr. Jamal asserted falsely during the U of T Inquiry that she was shocked and distraught to learn about the data manipulation, wished that she had detected the error at an earlier stage, and that she had no intention to deceive anyone (Tab 12 [to the Agreed Statement of Facts]):

I was extremely shocked, distraught and mortified upon learning that the Revised Data contained significant errors, and that I had communicated incorrect results to the ASBMR Group. I had no idea that this error had occurred when I used the Revised Data to calculate the positive findings, when [my Research Associate] sent the results to Dr. Cummings prior to the ABSMR meeting, when I presented the data to the ABSMR group, or when I sent the Revised Data to Dr. Eastell following the ASBMR meeting.

....I had complete faith in [my Research Associate's] knowledge and competence. I cannot understand why the data would have been intentionally manipulated, and if it was, it does not make sense to me why [my Research Associate] would choose to do so....

I wish that the error in the data has been detected at an earlier stage.

I want to clarify that there was absolutely no intention on my part at any time to deceive Dr. Cummings, Dr. Eastell or the other members of the ABSMR Group....

53. She also falsely asserted that the complaint against her was motivated by Dr. Cummings' "deep personal interest" in ultimately proving nitrates can be used to prevent fractures (Tab 12 [to the Agreed Statement of Facts]):

By way of background, Dr. Cumming has for many years had a deep personal interest in pursuing the nitrates research and proving that nitrates increase bone formation and decrease bone resorption, improve bone geometry and BMD.....

...

*Why would an experienced researcher (or a colleague of his) make a formal complaint of research misconduct about a colleague and co-investigator for whom he has been a mentor for almost twenty years? Particularly when there was no reason to believe that I was involved in knowingly misstating findings or data in connection with the NABT Study and there was no reason to believe that I would not make all of the JAMA data available to him?* The only answer I could come up with was that the accurate results of the NABT Study, once reported, would likely have been a significant blow to Dr. Cummings, particularly after the excitement generated by the initial (incorrect) analysis, and this may have proven to be an insurmountable setback to his goal of proving that nitrates can be used to prevent fractures in post-menopausal women. For this I am truly sorry, but I do not believe that it justified the personal attack on me that is this complaint.

**(iii) Women’s College Hospital Strikes an Investigative Committee**

54. Following receipt of the U of T Inquiry report, WCH assumed the sole jurisdiction for the investigation. On June 1, 2015, an Investigative Committee (the “IC”) was appointed with a mandate to investigate the allegations of research misconduct alleged in the complaint and to expand the investigation if the evidence disclosed new related instances of possible misconduct.
55. After conducting its extensive investigation, in a report dated October 8, 2015, the IC concluded that Dr. Jamal engaged in numerous acts of research misconduct, including that Dr. Jamal fabricated study data in each of the NABT, Scerlostin and JAMA studies to support the study hypothesis. An excerpted copy of the IC report (containing sections A to F) is attached at Tab 14 [to the Agreed Statement of Facts].
56. Dr. Jamal admits the findings, analysis and conclusions of the IC as set out in its report, and acknowledges that the findings, analysis and conclusions are based on materials referenced therein and gathered by the IC during the investigation. Dr. Jamal acknowledges the extensive steps the IC was required to take to uncover her data

falsification.

57. As part of the IC's investigation, a forensic expert was retained to examine various computer hard-drives, email communication, data sets and documents, among other things, passed between researchers and collaborators in the JAMA Study, the Sclerostin Study and the NABT Study. The forensic expert's report is attached at Tab 15 [to the Agreed Statement of Facts]. Dr. Jamal admits the findings, analysis and conclusions of the forensic expert as set out in its report, and acknowledges that the findings, analysis and conclusions are based on the documents and materials referenced therein.

**D. Dr. Jamal Engaged in Professional Misconduct- NABT Study**

58. Following the extensive investigation of the IC, with respect to the NABT Study, it was determined, and Dr. Jamal admits, that:
- (a) Dr. Jamal manipulated study data in August 2014 with the intention of supporting the underlying hypothesis that nitrates reduced bone loss and prevent osteoporotic fracture;
  - (b) Dr. Jamal presented these falsified results to her collaborators and to a small audience at the ASBMR conference;
  - (c) Contrary to the repeated assertions made by Dr. Jamal prior to and during the investigation, her Research Associate had no role in the falsification of the study data. These allegations by Dr. Jamal were wholly unjustified and completely inappropriate; and,
  - (d) Dr. Jamal engaged in numerous acts to avoid detection and falsely implicate her Research Associate once Dr. Eastell raised concerns that the data had been systematically modified, including ensuring her Research Associate was not copied on various emails, sending falsified data sets to Dr. Eastell and representing those were the data sets prepared by her Research Associate, and misrepresenting to her Research Associate what she had sent Dr. Eastell. Dr. Jamal continued to do the same throughout the U of T Inquiry.

**E. Dr. Jamal Engaged in Professional Misconduct- Sclerostin Study**

59. The IC also closely examined the Sclerostin Study which had been initiated in or around 2011 following the JAMA Study. The hypothesis of the Sclerostin Study was that active treatment subjects receiving nitroglycerin would experience a decrease in serum sclerostin and a corresponding increase in bone mass.
60. In December 2011, Dr. Jamal provided her collaborators with data in a form ready for statistical analysis, which she purported was the raw data for the Sclerostin Study. However, as revealed by the IC in its investigation, unbeknownst to her collaborators, the data contained in these files had been manipulated by Dr. Jamal in a systematic fashion to support the study hypothesis.
61. In early 2012, Dr. Jamal's colleagues noted that Dr. Jamal appeared to have relied on a different set of data than one of their collaborators who had run his own statistical analysis. Dr. Jamal initially identified the correct data, but then, on more than one occasion, specifically directed her colleague to rely on the data she had falsified, claiming it was the correct data.
62. The statistical analysis prepared by her colleague based on the falsified data demonstrated significant reduction of sclerostin in the treatment group.
63. Ultimately, Dr. Jamal's colleagues prepared a manuscript based on this analysis. The conclusion stated "our results suggest that nitroglycerin treatment substantially increases bone mass in postmenopausal women by decreasing sclerostin production". This conclusion was based on Dr. Jamal's manipulated data. Dr. Jamal reviewed and approved the paper and is identified as an author.
64. The manuscript was submitted for review but was rejected. It was not resubmitted.
65. With respect to the Sclerostin Study, the IC determined, and Dr. Jamal admits:
  - (a) Dr. Jamal manipulated study data with the intention of supporting the underlying



hypothesis that active treatment subjects would see a decrease in serum sclerostin;  
and

- (b) Dr. Jamal directed her colleague to rely on the altered data, representing that it was the accurate data when discrepancies arose in the analysis.

## **F. Dr. Jamal Engaged in Professional Misconduct - JAMA Study**

- 66. The IC's focus regarding the JAMA study was to determine whether the raw data existed, and if so, where was it located and in what format. However, in the course of the investigation, the IC found that Dr. Jamal had manipulated data in the JAMA study as well, and, further, that she had misappropriated and/or altered patient records in an attempt to conceal the data manipulation.

### **(i) Dr. Jamal Intentionally Manipulated Study Data**

- 67. The JAMA study commenced in November 2005 and was completed in March 2010. It involved obtaining three different measurements from study subjects:
  - Bone Mineral Density ("BMD") involving scans carried out on study subjects;
  - Peripheral quantitative computed tomography ("pQCT") involving scans carried out on study subjects; and,
  - BSAP and NTx measured using subjects' serum and urine samples.
- 68. Dr. Jamal had full access to all of the data in the study and took responsibility for the integrity of the data and the accuracy of the data analysis.
- 69. The IC's investigation revealed that Dr. Jamal:
  - (a) Systematically altered the BMD data intentionally manipulating it to increase the apparent effectiveness of the treatment, in support of the study hypothesis;
  - (b) Systematically altered the pQCT data intentionally manipulating it to increase the apparent effectiveness of the treatment, in support of the study hypothesis; and,
  - (c) Systematically altered BSAP and NTx data by reducing the placebo values and

increasing the active treatment group data by constant amounts, in support of the study hypothesis.

70. Dr. Jamal's data manipulation remained undetected until 2015 when concern arose in the NABT Study and her collaborators became frustrated with her failure to deliver the raw data for the JAMA Study, giving rise to the complaint and ultimately the IC's investigation.

**(ii) Dr. Jamal Continued to Deceive her Colleagues during the IC Investigation**

71. As set out above, in late 2014 and early 2015, Dr. Cummings and Dr. Eastell discussed the need to confirm the published JAMA results given the NABT results and asked Dr. Jamal to provide the raw data for the JAMA Study. In the course of responding to Dr. Cummings requests, on April 17, 2015, Dr. Jamal sent to Dr. Cummings what she purported was the "raw data" for one of the study measurements. However, the data she provided was data that had been systematically modified by Dr. Jamal.
72. During the IC's investigation, Dr. Jamal continued to falsely maintain that the data she had sent to Dr. Cummings in April 2015 was the actual raw data for the particular measurement.

**(iii) Dr. Jamal Tampered with Patient Records in an Attempt to Avoid Detection**

73. During the IC's investigation, in an effort to locate the raw data, the IC requested that Dr. Jamal provide it with hardcopies of the BMD and pQCT scans that she had advised Dr. Cummings she had located. Dr. Jamal advised that the BMD hard copies were in her office and that she was in possession of the pQCT hard copies.

***BMD Hard Copies***

74. A review of a selection of BMD scans obtained from Dr. Jamal's office revealed that the active treatment subjects' BMD scans had been replaced with scans from other patients, most of whom were not participants in the JAMA Study. Dr. Jamal took BMD scans

(patient records) from various patients who had no connection to the study, redacted their names and other information, including scan dates, hand wrote a study subject ID on the patient record, and attempted to pass off the scans as the “raw data” that supported the published study analysis.

75. To do this, Dr. Jamal accessed confidential patient records for an improper purpose, without consent or legal authority to do so, in violation of patient confidentiality and privacy.
76. Dr. Jamal had provided photocopies of these doctored BMD scans to Dr. Cummings under the pretense of providing him the raw data for the JAMA Study.

#### ***pQCT Hard Copies***

77. The IC investigation revealed that Dr. Jamal manually altered pQCT records (patient records), by superimposing false data onto the actual patient record. The alteration was deliberate and designed to give the appearance that the hard copy pQCT scans Dr. Jamal was providing to the IC was “raw data” that matched the published JAMA results.
78. Dr. Jamal held out these doctored records to the IC as *bona fide* patient records containing what purported to be the “raw data” that supported the published study analysis.

#### ***Raw Data had been Available to the Collaborators***

79. The IC determined that some of the raw data for the JAMA study had been available to Dr. Jamal such that she could have provided this information to her collaborators as requested.
80. Instead, Dr. Jamal provided altered patient records attempting to pass them off as “raw data” in her possession, and knowingly provided inaccurate data to her collaborators.
81. Dr. Jamal’s actions with original patient records (BMD scans and pQCT records) amount to a misuse and misappropriation of confidential patient information, in violation of patient confidentiality and privacy.

**G. Misconduct During Investigation**

82. Dr. Jamal also engaged in additional misconduct during the IC's investigation. Specifically, Dr. Jamal took steps to make relevant evidence unavailable to the IC.

**(i) Dr. Jamal's Computers**

83. On May 12, 2015, Dr. Jamal was advised by WCH that a forensic investigation was going to be conducted on some or all of Dr. Jamal's computers.
84. During the IC's investigation, Dr. Jamal was untruthful regarding the whereabouts of her old computer, a computer she used up until January 2014, initially stating she was unaware of its whereabouts and then later acknowledging accessing it. Video footage and witness accounts established that Dr. Jamal removed a computer from the premises during the investigation, after being advised that a forensic review of her computers was going to be conducted. Dr. Jamal's old computer could not be located.
85. Moreover, after being advised that a forensic review of her computers was going to be conducted, Dr. Jamal removed the computer she was using at the time (her "current computer") from her office and brought it to her home where she reviewed files on it. Dr. Jamal falsely claimed she did not alter any data on the current computer. Forensic analysis established that she did, in fact, delete relevant files on May 23, 2015, thereby destroying evidence and obstructing the investigation.

**(ii) Canadian Blood Services**

86. On May 19, 2015, during the IC's investigation, Dr. Jamal entered Canadian Blood Services where raw blood and urine samples from the JAMA Study were stored. Dr. Jamal manipulated freezer temperatures, affecting the samples that had been maintained, in order to cover up her misconduct.

## **H. Some Consequences of Dr. Jamal's Misconduct**

87. As early as 2010, Dr. Jamal falsified results leading to the JAMA publication to support a clinical hypothesis, and further studies intended to bolster these findings (Sclerostin and NABT). As part of the JAMA Study, falsified results were communicated to study participants. In some cases, results were copied to the study participant's family doctor; in other cases, study participants were told to take the results to their family doctor. None of the participants had osteoporosis. The consent forms executed by patients advised that if the study was successful, further research would be required before nitroglycerin treatment would be available for use.
88. Knowing that she had falsified the JAMA results to support her hypothesis regarding nitroglycerin treatment, Dr. Jamal then continued to collaborate with others, to obtain funding, including from NIH and CIHR, to conduct further research (for example, the Sclerostin Study and NABT Study), including research on human subjects, without any evidentiary foundation.
89. There are known risks associated with nitrate treatment, including headache, nausea and postural hypotension. In the JAMA Study, for example, 104 of 157 women who dropped out of the one week run-in phase reported headaches and nausea.
90. Dr. Jamal placed patients in a subsequent clinical study (the NABT Study), exposed these patients at a minimum to the risk of headaches, and did so with knowledge that there was no basis to support any potential benefit.
91. Following the IC Investigation, WCH notified each participant in the JAMA Study that they may have in fact received incorrect results. Participants were asked to advise their family physicians, who could in turn consider this information in the ongoing monitoring of the individual's bone health. WCH has stated that "there is no evidence of negative outcomes for any of these research participants."
92. In December 2015, the Journal of the American Medical Association retracted the JAMA Study. The Notice of Retraction is attached at Tab 16 [to the Agreed Statement of Facts].

93. On May 4, 2016, the President of CIHR declared Dr. Jamal permanently ineligible to hold, participate in, or apply for CIHR funding or funding from the other two federal research agencies (NSERC or SSHRC) or any Tri-Agency programs; and permanently ineligible to participate in Agency review processes. She is also required to reimburse CIHR for the funds spent on the study. The Notice from CIHR is attached at Tab 17 [to the Agreed Statement of Facts].

## **PART II - ADMISSION**

94. Dr. Jamal admits the facts specified above, and admits that, based on these facts, she engaged in professional misconduct, in that:
- (a) She engaged in an act or omission relevant to the practise of medicine that, having regard to all the circumstances, would reasonably be regarded by members as disgraceful, dishonourable or unprofessional, under paragraph 1(1)33 of O. Reg. 856/93, made under the Medicine Act, 1991 (“O/Reg. 856/93”);
  - (b) She failed to maintain the standard of practice of the profession under paragraph 1(1)2 of O/Reg. 856/93; and
  - (c) She engaged in conduct unbecoming a physician.

## **FINDING**

The Committee accepted as correct all of the facts set out in the Agreed Statement of Facts. Having regard to these facts, the Committee accepted Dr. Jamal’s admission and found that she committed an act of professional misconduct, in that: she has failed to maintain the standard of practice of the profession; she has engaged in an act or omission relevant to the practice of medicine that, having regard to all the circumstances, would reasonably be regarded by members as disgraceful, dishonourable, or unprofessional; and she has engaged in conduct unbecoming a physician.

## **PENALTY AND REASONS FOR PENALTY**

Counsel for the College and counsel for Dr. Jamal made a joint submission as to an appropriate penalty and costs order.

The Committee considered the joint submission on penalty and costs and accepted the proposed order as appropriate to protect the public, maintain the public's confidence in the College's ability to regulate the profession in the public interest, provide specific deterrence to the member, and serve as general deterrence for others.

Revocation is the most severe penalty for a practising physician. The Committee was in agreement that revocation of Dr. Jamal's certificate of registration is the appropriate penalty in this case, for the following reasons.

Dr. Jamal was fully aware of the extent and impact of her professional misconduct. Dr. Jamal is a fully qualified specialist in internal medicine with the Royal College of Physicians and Surgeons of Canada. She earned a PhD in clinical epidemiology from the University of Toronto and did post-doctoral work in San Francisco. In 2005, she was appointed to the active clinical staff and to the Research Institute at Women's College Hospital. She is an Associate Professor at the University of Toronto. These are world class institutions. Her education, clinical practice, research experience and peer group would have made her fully aware of the nature and extent of her egregious misconduct and its impact on individuals and institutions.

Dr. Jamal is solely responsible for falsification of the research data. There were two other physicians who were co-investigators in this work and they were not part of the deception. According to the Agreed Statement of Facts, "[a]s Principal Investigator, Dr. Jamal had full access to all of the data in the study and took responsibility for the integrity of and the accuracy of the data analysis." The retraction of the JAMA article states: "None of the other co-authors were involved in the misrepresentation of these data." Her Research Associate had no role in this.

Dr. Jamal intentionally and repeatedly falsified data in the JAMA Study, the Sclerostin Study and the NABT Study to support the hypothesis that nitroglycerin increases lumbar spine bone mineral density in osteoporosis. The JAMA study began in 2005 and was completed in 2010. The Sclerostin Study was in 2011. The NABT Study was from 2012 to 2014. Her dishonesty in altering the research data, denying her actions, blaming others and attempts at cover-up were deliberate and repeated. It did not end until she was confronted with the full report completed by the Investigative Committee of Women's College Hospital in October 2015. Her professional misconduct was not a momentary lapse of judgment.

Dr. Jamal was dishonest and deceitful with her colleagues and during the investigation process. She did not admit her dishonesty when initially confronted by her research partners, the University of Toronto Inquiry, or the Investigative Committee of Women's College Hospital. During the University of Toronto Inquiry, she indicated, "I was extremely shocked, distraught and mortified upon learning that the Revised Data contained significant errors and that I had communicated incorrect results to the ASBMR Group."... "I want to clarify that there was absolutely no intention on my part to deceive Dr. Cummings, Dr. Eastell or other members of the ABSMR Group." When she was asked for the raw data of the JAMA Study by Dr. Cummings and Dr. Eastell to reexamine the findings, she claimed that it was not available. She stated "we should not pursue this." The files she submitted to the University of Toronto Inquiry were files she personally manipulated and not the original files of her Research Associate as she claimed. She went so far as to illegally access patient records to alter data and destroy and change computer files. She disposed of an old computer so the forensic computer experts could not examine it. She went into the Canadian Blood Services facility and changed freezer temperatures to damage blood and urine samples in a strenuous attempt to cover up her deceptions during the IC's investigation. This prolonged deception and dishonesty is considered by the Committee to constitute serious professional misconduct.

Dr. Jamal attempted to put all the blame on other people. When Dr. Eastell confronted her about the incorrect data, she blamed her Research Associate for changing the data and then lied in claiming to have spoken to the Vice President of Research at Women's College Hospital about her Research Associate's misconduct. During the University of Toronto Inquiry, she attempted



repeatedly to attach the entire blame on her innocent research associate, stating: "I had complete faith in my [Research Associate's] knowledge and competence. I cannot understand why the data would have been intentionally manipulated, and if it was, it does not make sense to me why [my Research Associate] would choose to do so..." "...If the data was indeed manipulated intentionally, the only person who could have engaged in such conduct was [my Research Associate]." Dr. Jamal "excluded her [Research Associate] from participating in conference calls or meetings regarding the NABT Study" and restricted "her work to administrative tasks." This Research Associate's career could have suffered significantly from these false accusations. Dr. Jamal also attempted to discredit her colleague, Dr. Cummings, claiming that his complaint about her was motivated by his "deep personal interest" in a positive result of treating osteoporosis with nitroglycerin and as a "personal attack on me." Fortunately for Dr. Cummings, Dr. Jamal was not successful in discrediting him. Such disregard for her Research Associate and her physician research collaborators is totally unprofessional.

The reputation of Women's College Hospital, the University of Toronto and the research community of Canada is adversely affected by her actions. Her research partners and JAMA also had to deal with the negative effect of Dr. Jamal's misconduct.

Although there was no evidence that permanent harm was done to patients in the studies, there were significant adverse effects, such as nausea and headaches, severe enough to cause many participants to withdraw. There would have been no reason to do the Sclerostin Study and the NABT Study with their adverse effects on some participants, if the JAMA Study conclusion had been based on true data showing no advantage to nitroglycerin treatment.

The financial costs of Dr. Jamal's deception and denials are significant. Research funds and her co-investigators time and efforts for further studies on the effect of nitroglycerin on mineral bone density in osteoporosis were wasted because of the conclusion in the JAMA report based on her false data. Although she is required to repay \$263,914.00 to the Canadian Institute of Health Research for the funding she received, there were other research funds impacted and the extensive investigation by Women's College Hospital was prolonged by her initial denial of the

truth and was itself expensive. Scarce resources in respect to medical research have been wasted, which impacts adversely on the health system and the public.

In the Committee's view, Dr. Jamal's admission to the facts after completion of the full investigation report of Women's College Hospital, her subsequent resignation from Women's College Hospital, her acceptance of the Agreed Statement of Facts before the College Discipline Hearing, and the fact that she has no prior discipline history with the College and no concerns about clinical competence are not sufficiently mitigating to warrant anything less than full revocation of Dr. Jamal's certificate of registration for her serious professional misconduct.

## **COSTS**

The Committee finds this to be an appropriate case to assess against the physician the costs for one day of hearing, in the amount of \$5,500.00, as agreed upon by the parties.

## **ORDER**

The Committee stated its finding of professional misconduct in paragraph 1 of its written order of March 6, 2018. In that order, the Committee ordered and directed on the matter of penalty and costs that:

2. the Registrar revoke Dr. Jamal's certificate of registration effective immediately.
3. Dr. Jamal appear before the panel to be reprimanded.
4. Dr. Jamal pay costs to the College in the amount of \$5,500.00 within 30 days of the date of this Order.

At the conclusion of the hearing, Dr. Jamal waived her right to an appeal under subsection 70(1) of the Code and the Committee administered the public reprimand.

**TEXT of PUBLIC REPRIMAND**  
**Delivered March 6, 2018**  
**in the case of the**  
**COLLEGE OF PHYSICIANS and SURGEONS of ONTARIO**  
**and**  
**DR. ABIDA SOPHINA JAMAL**

Dr. Jamal,

The Committee views your behaviour as shocking and shameful. Your falsification of research data and dishonesty strikes at the fundamental faith in the medical profession.

Your extensive attempts at cover up add further to your breach of the public trust. The impact of your misconduct is far reaching. This has affected not only your colleagues, but Women's College Hospital, the University of Toronto, and the reputation of the Canadian research community.

You were highly qualified to carry out research on human subjects in a world class setting, and you betrayed all of those involved. The Committee is of the view that your misconduct is egregious, and is of the highest order.

In addition to the falsification of research data and dishonesty, you betrayed trust in your research assistant, and it can only be imagined the resultant effects on this individual. You wasted precious health care research funds.

While we accept that there were no harmful outcomes, there were adverse effects on study participants. While the community accepts that you are ashamed of your actions, we remain at a loss as to how to explain why you acted in the manner you did. This is something you will have to come to terms with in future years.

*This is not an official transcript*