

**立法會**  
***Legislative Council***

LC Paper No. CB(2) 905/00-01  
(These minutes have been seen by  
the Administration)

Ref : CB2/BC/1/00

**Bills Committee on  
Immigration (Amendment) Bill 2000**

**Minutes of meeting  
held on Tuesday, 28 November 2000 at 10:45 am  
in Conference Room A of the Legislative Council Building**

**Members present** : Hon Ambrose LAU Hon-chuen, JP (Chairman)  
Hon Cyd HO Sau-lan  
Hon Margaret NG  
Hon Andrew WONG Wang-fat, JP  
Hon Howard YOUNG, JP  
Hon LAU Kong-wah

**Member absent** : Hon James TO Kun-sun

**Public Officers attending** : Mr Timothy TONG, JP  
Deputy Secretary for Security 3  
  
Ms Linda K P SO  
Principal Assistant Secretary for Security  
  
Mr Andy CHAN  
Assistant Secretary for Security

Mr Anthony WU  
Deputy Law Officer (Civil Law)

Mr Gilbert MO  
Deputy Law Draftsman

Dr C M LAU  
Chief Chemist

Dr LAW Man-ye, Betty  
Senior Chemist

Mr SIU Chung-kit  
Assistant Director of Immigration

Mr TSOI Hon-kuen  
Principal Immigration Officer

**Attendance by invitation :** Hong Kong DNA Chips Limited

Mr Terence LAU  
General Manager

Dr Richard A COLLINS  
Project Manager

**Clerk in attendance :** Mrs Sharon TONG  
Chief Assistant Secretary (2)1

**Staff in attendance :** Mr Arthur CHEUNG  
Assistant Legal Adviser 5

Mr Raymond LAM  
Senior Assistant Secretary (2)5

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**I. Meeting with a deputation and the Administration**

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(LC Paper Nos. 312/00-01(02) and CB(2) 378/00-01(01))

Meeting with representatives of the Hong Kong DNA Chips Limited and the Administration

At the invitation of the Chairman, Dr Richard COLLINS presented the submission of Hong Kong DNA Chips Limited. In explaining the difference between DNA profiles and DNA samples, he said that DNA samples were specimens obtained from persons undergoing DNA tests, while DNA profiles were the results obtained from DNA analysis of the samples.

2. Deputy Secretary for Security 3 (DS for S3) presented the Administration's response, which was tabled at the meeting, to the points raised in the submission of Hong Kong DNA Chips Limited.

*(Post-meeting note : The Administration's response tabled at the meeting was issued to members vide LC Paper No. CB(2) 381/00-01(01) on 29 November 2000.)*

3. Members noted the presentation by Senior Chemist (SC) on the application of DNA analysis in genetic testing, the procedures to be adopted as well as the results of simulation tests carried out by the Government Laboratory and the Mainland authorities. SC informed members that samples of eight simulated cases were exchanged between the Government Laboratory and the Criminal Technology Division of the Guangdong Provincial Public Security Department in August 2000 for separate DNA analysis. The results generated by both sides were fully consistent.

4. Mr Howard YOUNG asked whether an applicant who lodged an appeal to the Immigration Tribunal (the Tribunal) was allowed under the Bill to present the results of DNA tests conducted by a private laboratory as evidence for verification of his claimed parentage. DS for S3 responded that as the Tribunal might receive and consider any information and evidence relevant to an appeal case, it might consider the results of genetic tests conducted by private laboratories. Deputy Law Officer (Civil Law) (DLO(CL)) added that the Bill did not bar genetic test results of private laboratories to be received and considered by the Tribunal. Miss Margaret NG expressed doubt about whether this was permissible under the Bill. She said that it seemed that under the Bill, the Tribunal could not accept the test results provided by private laboratories as evidence relating to the case. She requested the Administration to provide a written response on the issue.

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5. In response to Miss Margaret NG, SC said that there was no precedent in other countries where genetic tests of samples of different members of a family unit were conducted by two laboratories. She informed members that in order to ensure consistency in the standard of the genetic tests conducted by the Government Laboratory and the Criminal Technology Division of the Guangdong Provincial Public

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Security Department in the Mainland, both sides would adopt the same technology and procedures which met international accreditation standard. The consistency had been confirmed in the simulation tests conducted in August 2000. She added that quality assurance measures and monitoring mechanisms would be established to ensure that the test results were accurate and free from fraud.

6. Miss Margaret NG sought the views of Hong Kong DNA Chips Limited on the simulation tests conducted by the Government Laboratory and the Mainland authorities. Dr Richard COLLINS responded that he was not disputing the skills of the Government Laboratory. However, he considered that DNA samples belonging to one family unit should be analyzed in the same laboratory rather than in two laboratories.

7. Miss Margaret NG asked about the technological viability of conducting genetic tests in two laboratories in the verification of parentage. SC responded that with the adoption of quality assurance measures and procedures which met international accreditation standard, the outcome of genetic analysis would not be affected by conducting genetic tests for members of a family unit in two laboratories.

8. Mr Andrew WONG asked about the details of the proposed arrangement for genetic tests to be conducted by the Government Laboratory and the Mainland authorities. SC said that the Mainland authorities would be responsible for taking and testing the tissue specimens of an applicant and his or her mother (or father) residing in the Mainland. The Immigration Department would be responsible for taking the tissue specimens of the applicant's father (or mother) in Hong Kong and the test would be conducted by the Government Laboratory. While both sides would not exchange the DNA samples for DNA analysis, they would exchange the data obtained from DNA tests for separate analysis by both sides. Mr Terence LAU said that the results derived from the analysis of these exchanged data would be incorrect, if the data was inaccurate. He stressed that there had never been any international proficiency test on genetic analysis being conducted in two laboratories. He added that parentage testing differed from forensic DNA analysis in that the samples of a family unit were all tested in the same laboratory.

9. Miss Margaret NG asked about the drawbacks of conducting DNA analysis of the samples of different members of a family unit in two laboratories. Mr Terence LAU responded that differences in reaction conditions, such as differences in equipment, reagent and time, might result in errors, such as band shifting. It would be more accurate if the analysis was conducted using the same equipment. In response to Mr Andrew WONG's question about the percentage of error arising from variations in equipment and reagent, Mr Terence LAU said that the percentage of error usually differed from one laboratory to another. He said that the American Association of Blood Banks (AABB) had never given consideration to conducting parentage tests in two different laboratories.

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10. SC said that although the requirements in respect of forensic analysis and parentage testing were different, DNA analysis was frequently applied in forensic analysis. She added that the Government Laboratory was accredited by the American Society of Crime Laboratory Directors for forensic serology and DNA analysis. Such accreditation status covered the full scope of forensic DNA analysis of which parentage testing was only a part.

11. On the question of variation arising from not using the same equipment and reagents, SC said that with the quality assurance measures adopted by the Government Laboratory and the Mainland authorities, variation arising from the use of different equipment or reagent would be minimized. The results of the genetic analysis under the prescribed procedure would not be affected. She stressed that it was not unusual in forensic analysis that a sample related to a case was analyzed at one time while another sample related to the same case was collected and analyzed one or two years later. It was only with the adoption of stringent quality assurance measures that comparison of data generated at different times could be made and the offenders would be successfully convicted. She added that there was a case in the United States where a man was convicted of having murdered a number of women in different states of the country. Without the matching of DNA information provided by different states in respect of different exhibits seized from the respective crime scenes, the man could not have been successfully convicted.

12. Miss Cyd HO questioned whether any international accreditation body had considered conducting genetic tests of the samples of a family unit in two laboratories. She said that even if the percentage of error arising from conducting genetic tests in two laboratories was minimal, there was no reason why such an error could not be totally eliminated by conducting the tests in the same laboratory. Referring to the second sentence of paragraph (e) of the Administration's response to the submission of Hong Kong DNA Chips Limited, she asked whether the arrangement of conducting genetic tests in two laboratories was proposed because the Mainland authorities wished to be involved in the process through which parent-child relationship was to be established. She said that the Administration should explain why it was necessary in terms of technology and procedure for genetic tests to be conducted in two places. It should also explain the power and role of the Mainland authorities in the issue of a Certificate of Entitlement (C of E) and its relationship with provisions in the Bill.

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13. Miss Margaret NG echoed the views of Miss Cyd HO. She asked whether the Mainland authorities were entitled under Article 22(4) of the Basic Law (BL22(4)) to take part in conducting the genetic tests. Referring to the last paragraph of the Administration's response, she expressed concern about the caseload in respect of genetic testing for the Government Laboratory and the waiting time needed before a genetic test could be performed.

14. DS for S3 responded that the testing arrangements were not proposed in response to the wish of the Mainland authorities. He stressed that the Administration

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was satisfied that the proposed arrangements, under which genetic tests would be conducted in two places, would yield reliable and accurate results. The proposed arrangements were drawn up after discussion with the Mainland authorities and consultation with the Independent Commission Against Corruption as well as the Department of Justice. He added that for the purpose of granting exit approval under BL22(4), the Mainland authorities wished to be assured of the claimed parent-child relationship pertaining to BL24(2)(3) and be directly involved in the process through which such relationship was established. This was the position of the Mainland authorities in relation to the granting of exit approval.

15. Mr Andrew WONG asked whether the Government Laboratory, the Criminal Technology Division of the Guangdong Provincial Public Security Department and the Hong Kong DNA Chips Limited had received accreditation for parentage testing. He also asked about the organizations offering such accreditation.

16. Mr Terence LAU said that accreditation was an independent assessment provided by a non-profit making professional association on whether a laboratory had attained a certain standard. Hong Kong DNA Chips Limited had received an ISO9002 award in respect of DNA parentage testing. It was applying for accreditation by AABB and had already taken two proficiency tests. He added that besides AABB, the National Association of Testing Authorities of Australia also offered similar accreditation. In response to Miss Margaret NG's question about whether the conduct of laboratory personnel was one of the considerations for accreditation, Mr LAU said that although good conduct of laboratory personnel was not a requirement for accreditation, the security of a laboratory and the conduct of its personnel were among the areas examined in the overall assessment of a laboratory. He added that in order to prevent misconduct by laboratory personnel in genetic tests, samples sent to a laboratory should bear no information about the identity of the persons from whom samples were taken.

17. Mr LAU Kong-wah pointed out that the reality was that an applicant for C of E was in the Mainland and one of his parents was in Hong Kong. He said that there might be errors even if genetic tests were conducted using the same equipment but at different times. He asked about the difference in the percentage of error in respect of genetic tests conducted by the same laboratory and those conducted by two different laboratories. Mr Terence LAU responded that the Hong Kong DNA Chips Limited suggested that the genetic testing of the samples of a family unit should be conducted in the same laboratory and at the same time. He added that the suggestion referred to the process of testing of samples, but not the process of taking samples.

18. As regards the power of exclusion of genetic testing, SC informed members that there was a margin of error of one in every 500 000 cases for a claimed parentage to be wrongly confirmed and less than one in 1 000 000 cases for a true parentage to be wrongly rejected. Mr Andrew WONG asked about the sample size involved in the estimation of these margins of error. He also asked about the difference in margins

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of error between conducting genetic tests in two different laboratories and in the same laboratory. SC responded that the margins of error were statistical assessments based on the population characteristics of the Chinese ethnic group. It reflected the power of exclusion of genetic testing.

19. Mr LAU Kong-wah asked about the factors that would be taken into account in the calculation of the margins of error as referred to in paragraph 18 above. DS for S3 said that technical factors had been taken into consideration in the estimates. He stressed that without an effective monitoring mechanism, the margins of error and possibility of fraud would be much increased. Mr Terence LAU said that the margins of error only indicated the distribution within a race in population genetics. SC reiterated that the margins of error reflected the power of exclusion in genetic testing.

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20. Mr Andrew WONG asked whether the percentage of error was the same in respect of genetic tests conducted by the same laboratory and two different laboratories. The Chairman requested the Administration to provide a paper on the issue. He added that the Hong Kong DNA Chips Limited could also provide members with a further submission, if it had any further views or response on the issues raised at the meeting.

## **II. Date of next meeting**

21. Members agreed that the next meeting be scheduled for 19 December 2000 at 10:45 am to continue discussion with the Administration.

22. There being no other business, the meeting ended at 1:00 pm.

Legislative Council Secretariat

15 January 2001