

Report from teaching sabbatical at University of Otago February – April 2020

On June 4th 2019 I obtained a grant of 220 000 SEK within the program “Grants for Teaching Sabbaticals” for a two month visit to University of Otago, Dunedin, New Zealand. I left Sweden on February 15th 2020 and planned to return on April 18th. Dr. Helen Wang substituted for me during my absence and was responsible for the Molecular biology-part of the course 3BL106, Biochemistry with molecular biology. However, due to covid-19, the plan was changed. The University of Otago closed down and converted to distance teaching on March 23rd; there was a complete lock-down in New Zealand from March 26th and our flights home were cancelled. Since the Swedish Embassy urged us to return to Sweden, we returned one week earlier, on April 12th, 2020, at a considerable extra cost. During my visit I still managed to reach most of the goals I had set up, since I had been able to work according to plan for more than 5 weeks in Dunedin, and could continue to work from home, both in New Zealand and after my return to Uppsala. The financial report for the grant is included (Appendix 1).

During the first few days I was introduced to the department and campus by the Course Director for Bachelor of Medical Laboratory Science (BMLSc) at the University of Otago, Dr. Heather Brooks. Practical details were sorted and I was introduced to staff at the Department. I was also provided with Student material and the University of Otago Calendar which contained a lot of information for me to go through during my visit. An introduction to the Health science degrees at the University of Otago in general, and in particular the Medical Laboratory Science degree was provided through informal discussions, material provided, access to Blackboard and my own research on internet. I did also undertake a self-guided campus tour, which gave me a feel for the campus and facilitated for me to find the different lecture rooms, which were spread all over campus.

A comparison of the Health Science degrees and in particular the Medical Laboratory Science between Uppsala University and the University of Otago has been compiled (Appendix 2). It can be concluded that even though the systems are quite different, with four years at University of Otago, including First year Health Science, and three years at Uppsala University, the outcome is fairly similar. The subjects taken and the total workload for the students are comparable. The area covered and the level of detail required from the students appears to be quite similar, at least in Biochemistry, which was studied in more detail. However, the potential of future exchange between the Universities at undergraduate level is low, due to the differences in set-up, e.g. the different academic years between the northern and southern hemisphere. Furthermore, all teaching at Uppsala University is in Swedish, including the practical tuition in hospital laboratories. In contrast, the possibilities for exchange at the post-graduate level is good. Research projects and papers at an advanced level can be performed at either University. Teaching at the advanced level is in English also in Sweden and the language would not present a problem for practical laboratory placements at research laboratories, since these are international workplaces.

An important aim with my stay was to gain experience in teaching in New Zealand. During my stay at University of Otago I have attended lectures, tutorials and laboratory classes for the Medical Laboratory Scientist students (MLS) during their second year for the MELS208 paper: Introduction to Diagnostic pathology and the MELS230 paper: Biochemistry. I have also participated in a streamed visit to the Sothern Community Laboratory with the students, i.e. visiting the hospital laboratory and attended on-line teaching with 4th year students. I had planned to attend the MELS305: Elements of Histology paper for 3rd year students, but unfortunately this was cancelled due to the covid-19 situation. This paper was investigated through Blackboard only, but gave important insights into how the change from campus teaching to distance teaching was handled at University of Otago, which was beneficial when I returned to Uppsala. Together with Dr. Braeden Donaldson, a statistical tutorial for MELS208 was set up. Unfortunately, the tutorial was postponed due to covid-19, so I missed the chance to lead the tutorial, as planned. Together with Dr. Tania Slatter I was also involved in providing ideas for a new module in MELS208. Furthermore, student assessment at different levels was studied. An important personal outcome is a laboratory for lipid analysis from first year Biochemistry. This laboratory session will be set up at Uppsala University, both for Biomedical Laboratory Scientists, Medical students and Biomedical students. This is a very good example of a practical outcome of internationalization and information exchange. An important attainment from the visit is how to handle large student groups with maintained quality, as they do at University of Otago, for example by utilizing the learning platform Blackboard for checking outcome of laboratory tutorials rather than written reports.

Another important aspect that I wanted to study during my visit was the accreditation process and to learn how feed-back from the profession regarding the teaching was provided.

The programme is subjected to approximately six-yearly internal, comprehensive curriculum reviews conducted by academic staff associated with the programme. In addition, all departments of the University are reviewed on a maximum 10-year rolling cycle. The Otago BMLSc degree is included in the Department of Pathology review, which is carried out by a panel of external and internal senior academic staff with graduate representation, in a system very similar to the system at Uppsala University. In addition to this, the Medical Science Council (MSC) of New Zealand, which registers Medical Laboratory Scientist (MLS), also do accreditation of education providers every 5th year. The last accreditation report was investigated in order to understand the process. New Zealand Institute of Medical Laboratory Science (NZIMLS) is a professional body for practitioners in MLS. Feed-back is gained from the profession, partly through NZIMLS representatives in boards et cetera, but more explicitly since a number of registered MLS, who work in laboratories, also take part in teaching at the programme. There are some academic teachers, that has an MLS-background, but they are not registered MLS. As in Sweden, the combination of an MLS-degree and a PhD is quite unusual.

To identify opportunities for collaborative research and research student exchange I aimed to investigate the research at the department. I gave a research presentation at the department on March 20th, which provided contact with a graduate student and a post-doc at the department for continued discussions. This part was not possible to develop further

since no physical meetings could take place after the covid-19 lock-down, but I still have established a number of contacts at University of Otago which can be used in the future to discuss further possibilities for collaboration.

Since I am a member of the equal opportunities group at the Disciplinary domain of Medicine and Pharmacy at Uppsala University, I was also interested to learn about cultural competency and medical ethics as practiced in New Zealand. In particular, the Maori population are protected through the Treaty of Waitangi, and it was interesting to learn more about this. According to the Mirror on Society policy, students from under-represented groups are promoted when applying to the professional programmes. These groups include Maori, Indigenous Pacific and, from 2020, also students from lower socioeconomic groups and students with refugee status. There is also specific support for these student groups in place at University of Otago. I participated in classes on Cultural competency and Treaty of Waitangi for the second year BMLSc classes (MELS 208), where I could contribute with a Swedish perspective and some input on Swedish strategies in these matters. It seems that Equity is more important in New Zealand, whereas we focus on Equality in Sweden. Even though the policy of Uppsala University is to encourage students from a wide range of socioeconomic backgrounds, no active measures to increase the numbers are undertaken and no specific support is in place. Furthermore, it was interesting to learn that an applicant or student that has been convicted or is subject to disciplinary procedures from a professional body may be declined admission to the programme or excluded from the programme at University of Otago, something that cannot happen at Uppsala University.

The teaching and learning plan of University of Otago 2013-2020 is a 2-page visionary document, and the Guidelines for teaching at Otago is a more concrete document focusing on how teachers and departments/institutions should work together to reach the goals in the plan. This was compared to corresponding document from Uppsala University (Pedagogiskt program för Uppsala universitet, 2018). The basis of the documents from both universities is very similar, focusing on promoting an excellent teaching environment, student-centred learning, research informed teaching and a focus on alignment between learning outcomes, type of teaching and assessment. The documents from both universities also acknowledge evaluations of both teachers and courses as essential in order to enhance quality of teaching and learning. In New Zealand there are no specific requirements for pedagogic education for teachers (professors, lecturers), instead the Guidelines focus on encouragement for teachers to undertake professional development. This can be provided by HEDC (Higher education development centre). To learn more about this I attended an HEDC workshop on "Teaching in a multilingual context", which was very interesting. The most striking difference is that the importance of progression within programmes and between degrees is emphasized in the document from Uppsala University, but not in the documents from University of Otago. Ensuring progression through the programme is facilitated by our organization, and I was glad to learn that our programme committee is performing well in this respect, since this is an issue under constant scrutiny. The corresponding Board of Medical Laboratory Science at University of Otago, does not have the same responsibility or control of the programme. For example, introduction of a new paper in the programme requires that decision is taken at the highest level within the university (University council), first being approved by the Board of Medical Laboratory

Science and other “lower” boards, and finally be approved by CUAP (the Committee on University Academic Programmes), a governmental body. This is a long and time-consuming process, but it ensures that students and professional bodies are involved in the decision. Since we have representatives of both students and the profession within our programme committee we can argue that our organization is beneficial for the development of the programme.

The final goal with my trip was to meet the profession to discuss similarities, differences and problems in the profession of Medical Laboratory Science, as practiced in Dunedin and Uppsala. A meeting with paper conveners and representatives of the profession involved in teaching was planned for one of my last weeks in Dunedin. However, due to the covid-19 situation this had to be cancelled. So far it has not been possible to set up this as an on-line meeting through Zoom due to the strain on all potential participants, both at the University and at the Southern Community Laboratory. Still, I have made a presentation and it can be used as a basis for discussions later on. The presentation, outlining differences between Uppsala University and University of Otago, has already been used for a presentation at my department and also for the paper conveners at Uppsala University.

Comparison of Medical Laboratory Science Degrees between Uppsala University and University of Otago

Before the comparison between the universities, it is important to note that the structure of labour at a diagnostic laboratory is different in New Zealand compared to Sweden. In Sweden, most of the employees are Biomedical Laboratory scientists. Sometimes other categories like “laboratory assistants” or “molecular biologists” are employed. There is a shortage of Biomedical Laboratory Scientist in Sweden, since the number of new registered BMLS cannot cover the number of employees that retire every year. During 2018 about 300 students obtained their degree in Sweden, from 10 different universities or other higher education providers.

In New Zealand, the majority of employees in the laboratory are Qualified Medical Laboratory Technicians, and there are 1-2 Medical Laboratory Scientists in each laboratory. The role of MLS is mainly in quality control and other more advanced assignments. The Medical Laboratory Technicians are trained mainly in the work place (two years) and are registered by NZIMLS (New Zealand Institute of Medical Laboratory Science). Thus, the majority of the MLS in New Zealand are expected to work with highly qualified duties, whereas there is a larger diversity on the type of duties for the Swedish MLS. Therefore, even though the total number of new MLS per year in New Zealand is proportionately considerably lower (about 70) compared to Sweden, it still appears to fulfil the needs of the labour market.

First year Health Science at University of Otago

First year Health Science		
Foundations of Biochemistry	BIOC 192	18 points
Cell and Molecular biology	CELS 191	18 points
The Chemical basis of biology and human health	CHEM 191	18 points
Human body systems 1	HUBS 191	18 points
Human body systems 2	HUBS 192	18 points
Biological Physics	PHSI 191	18 points
Population health	POPH 192	18 points

Requirements for admission to first year health science: No subject requirements, but chemistry, physics and biology at year 13 are strongly recommended.

First year Health Science is required for admission to: Dentistry, Medical Laboratory Science, Medicine, Pharmacy, and Physiotherapy and is also a good start for: restricted-entry programmes in Oral Health, Dental Technology, or Radiation Therapy.

More than 2 000 students are admitted to first year and all papers must be passed during the year in order to apply for the specific programmes. About 1500 students remaining the second semester during Biochemistry (BIOC 192). In recent years A or A+ students only have been accepted for Medicine (at least in the Health Science First year admission category). For admission for Medical Laboratory Science, at least B- is required for all categories. The degrees Bachelor of Medical Laboratory Science, Physiotherapy and Pharmacy requires an additional three years; Bachelor of Dental surgery an additional 4 years and Bachelor of Dental surgery with Honours as well as Bachelor of Medicine and Bachelor of Surgery an additional five years of training.

Nursing does not (!) require the First Year Health Science. Bachelor of Nursing is a three - year programme at Otago Polytechnic. After successful completion of the programme the students can sit the State Final Examination for registration as a Registered Nurse in New Zealand.

At Uppsala University (and in Sweden) the Degree of Bachelor of Medical Laboratory Science is three years full time studies, but science (mathematics, chemistry, physics and biology) from upper secondary school is required for admission. The same is true for Medicine (5.5 years total, changing to 6 years from 2021), Dentistry (5 years) and Pharmacy (5 years), but for Nursing (3 years) and Physiotherapy (3 years total at university) the requirements for science from upper secondary school are lower. There is separate admission to all degrees (programmes), based on grades from Upper secondary School. The grades cannot be translated to the system used in New Zealand.

Bachelor of Medical Laboratory Science (BMLS) at University of Otago

First year Health Science as described above. Admission to the degree for second year. All papers must be passed to continue to the third and fourth year.

Second year	Paper	Points
Introduction to Diagnostic Pathology	MELS 208	45
Infection and Immunity (for BMLSc)	MELS 223	18
Biochemistry (for BMLSc)	MELS 230	18
Human Biology: Cells to Systems (for BMLSc)	MELS 241	18
Physiology (for BMLSc)	MELS 251	21
Third year		
Diagnostic Chemical Pathology	MELS 301	30
Haematology and Transfusion Science	MELS 302	30
Principles of Pathology	MELS 304	15
Elements of Histotechnology	MELS 305	15
Medical Microbiology	MELS 306	30
Fourth Year (two of the following papers)		
Advanced Diagnostic Chemical Pathology	MELS 401	60
Clinical Microbiology	MELS 402	60
Clinical Virology	MELS 403	60
Diagnostic Molecular Pathology	MELS 404	60
Cytopathology	MELS 405	60
Haematology	MELS 406	60
Histopathology	MELS 407	60
Transfusion Science	MELS 408	60
Clinical Immunology	MELS 409	60
Medical Laboratory Science for Rural Health	MELS 410	60

The different papers during second and third year are taken in parallel with assessment partly during the paper (40% for MELS208) and partly during the Examination periods (June 3-17 and October 14th to November 7th 2020).

One point corresponds to a total workload of about 10 hours. Normally a student should take 120 points per year (1200 hours workload during 31 weeks).

Students must gain Terms in a paper in order to sit the final Examination. Terms requirements are normally based on satisfactory attendance at compulsory classes but may include aspects of performance, for example in laboratory classes. If an exam is failed with an overall grade of D (40-49%) the student has a right to sit a Special Examination (retake) provided that he/she did not fail more than 50% of the points for the whole year. If a student fails with an overall E grade (<40%) or fails the Special Examination or has failed Terms, the whole failed paper has to be taken again before progressing to the next year of the degree. At the University of Otago, a grading system (A+ - E) is used when marking final examinations and most internal assessments.

The fourth year consists of two placements (15 weeks each) in an accredited laboratory in New Zealand, Australia or Denmark (!). The students make a list of their choices for placements according to location and type of laboratory and are placed as close to their choices as possible. They should complete a logbook, undertake theoretical assignments and perform a research assignment (corresponding to about 1 day per week) during their placements.

Bachelor of Biomedical Laboratory Science at Uppsala University

First year	Paper (course)	Credits (Cr)
Basic Biomedical Laboratory Science	3OG039	11
Biochemistry with Molecular biology	3BL106	34
Anatomy, Physiology, Cell biology with Histology	3MC322	15
Second year		
Clinical Physiology	3ME053	7
Medical Microbiology	3ME055	11
Pathology and Clinical Genetics	3PA020	11
Clinical Chemistry and Haematology, Toxicology and Pharmacology	3KK014	13
Immunology and Transfusion Medicine	3MG042	12
Practical tuition I (part 1)	3KK015	6/12
Third year		
Practical tuition I (part 2)	3KK015	6/12
Medical Laboratory Data Analysis	3ME056	7
Practical Tuition II	3KK016	8
Applied Laboratory Science and Quality Assurance	3KK019	9
Progression in Biomedical Laboratory Science I	3MG053	7
Progression in Biomedical Laboratory Science II	3MC323	8
Degree Project	3MC324	15

The papers (courses) are taken sequentially and finish with one written examination and/or report. There are individual practical examinations in all papers during the first two years which have to be approved before admission to Practical tuition. The academic year starts August 31st, 2020 and ends June 4th, 2021.

One academic year corresponds to 60 Cr or 40 weeks full-time studies (an estimated student workload of about 1600 hours).

To be admitted to second year the student must have obtained 40 Cr (of 60 Cr) and be approved on at least 3 out of 5 exams. At this programme there are no grades, just approved ($\geq 60\%$) or fail ($< 60\%$) on all exams. To be admitted to third year the students must have obtained 90 Cr (of 120 Cr) and be approved on 8 out of 10 exams from the first two years. The students have the right to sit each exam 5 times (three chances per year). The students can do practical placements just one more time if they fail there.

The Practical tuition corresponds to two placements of four weeks each and one placement of five weeks at accredited laboratories. The students should also do two days within primary health care to be able to interact with patients and take blood samples. The degree project consists of a 10 weeks practical individual laboratory project in an accredited laboratory or within a research laboratory. The project is presented orally and as a written project report.

Comparison Uppsala University – University of Otago with respect to MELS

The advantage with first year health science is that the students are prepared for academic studies and only motivated students continue to the MELS degree. Most of the students admitted to the degree will continue and obtain their degree. In Uppsala extra students are admitted to the programme in order to compensate for losses during the first year, which is a strain on resources. It also makes it difficult to plan how many students we will have during second and third year. A disadvantage with the Health sciences first year is that the content must be more general to provide a suitable background for all professions and that the students probably don't identify themselves with the profession until second year. In Uppsala we focus on providing information regarding their future profession at a very early stage and the content of all papers during all three years is focused on their future profession.

Comparing the workload for the students in Uppsala and New Zealand it appears that the academic year is shorter in New Zealand compared to Sweden, and that the workload for the students taking four years in New Zealand would correspond to three years in Sweden. If this is true in real life would require a detailed comparison of curriculum. So far only the teaching in Biochemistry and Molecular biology has been compared in any detail, since that is the subject I am most familiar with. It appears that the learning outcomes from first and second-year biochemistry at the University of Otago together corresponds to the learning outcomes at Uppsala University.

The advantage with two long placements at an accredited laboratory, as the Otago students have, is that it would give the students a chance to be more proficient in their chosen areas and I would expect them to be able to work more independently when they are employed. The three shorter placements, as the Uppsala students have, is likely to provide the students with a broader experience of several work places, but for the students it is challenging to meet new colleagues so often and to learn new routines. They are prepared to work in a laboratory environment after their practical tuition, but some training on-site will be necessary before they will be able to work independently at any workplace.

On the other hand, I think that the longer research project that students at Uppsala University do probably gives a better research connection to their chosen subject. As a whole, I believe that the students' knowledge of research and development in Laboratory science is comparable at the two universities.

How is progression in generic abilities such as performing oral and written presentations throughout the programme ensured? At Uppsala University we have addressed this issue.

The Programme committee, Programme coordinator and Course Director are involved. A system for analysing content and examination of papers and look at progression, also regarding presentations (oral and written assignments etc.) is at hand. Exams from all papers are discussed in the Programme committee and an Excel spread sheet is used to keep track of abilities such as oral and written presentations, and the ability to plan experiments throughout the programme, to ensure progression. How is that done at Otago? The second year is focused on “teaching” the students self-directed learning, which is not challenged during first year Health Science. A large number of students and several papers at a time requires that for example laboratory assignments are short and can be performed “cook-book style”, i.e. with very careful instructions and very little room for error or individual thoughts. No lab reports are written during first year, due to the large number of students. During second and third years, different types of assignments that include for example written reports or oral presentations are included. However, there is no organized effort to coordinate the assignments between the different papers. This means that the ability to write their research paper during 4th year placement is not very well developed, according to Dr. Heather Brooks. The concerted action towards progression through the programme, also in generic abilities, is an area that could be developed at University of Otago.

Post-graduate degrees at University of Otago

Post-graduate Diploma in Medical Laboratory Science

One-year of study at an advanced level, comprises of Advanced Medical Laboratory Practice (45 points), paper in research methods (30 points) and Research Project (45 points).

Degree of Master of Medical Laboratory Science

Should have completed a post-graduate diploma in Medical Laboratory Science to be admitted (with credit or distinction). To obtain the Master’s degree the student should perform a research project corresponding to one year of full-time study. The candidate should have one or more supervisors, but at least one should be at the University. The thesis should be assessed by two examiners, at least one external to the University.

Post-graduate degrees at Uppsala University

Uppsala University has the right to award a post-graduate degree (60 Cr, one year, “Magister”) and a Master degree (120 Cr, two years) in Biomedical Laboratory Science.

The requirement for the Post-graduate degree is one-year full-time studies in Biomedical Laboratory Science with at least 30 Cr in Biomedical laboratory science at an advanced level. A Research project of at least 15 Cr (3OG053 or 3OG063) should be included. A Master in Biomedical laboratory science should include a Degree Project of 30 Cr (20 weeks, 3ME074). In addition, it should contain 90 Cr courses, of these at least 60 Cr should be at an advanced level in Biomedical Laboratory Science and not more than 30 Cr should consist of courses at a basic level. No specific requirements regarding types of courses (papers) is regulated. The papers could be from Uppsala University, other universities within Sweden or outside Sweden.

Possibilities for future student exchange

BMLS-students

When comparing the second year at Uppsala University to the third year at University of Otago, the curriculum is quite similar, both with respect to subjects and student workload. However, a student exchange during Uppsala University first and/or second year and Otago second and/or third year would still be complicated due to difference in set up and timetables for the academic year at the two Universities. The language barrier is another issue. Even though Swedish students are proficient in English and could manage to take papers at University of Otago, all papers are taught in Swedish at Uppsala University, which would create a huge problem for the Dunedin students in a regular exchange program.

It would be feasible for students from Uppsala University to do their research project at University of Otago, since that is performed from February-June, i.e. during first semester in Otago. The requirements for a placement are sufficiently similar to work as a research project, at least at certain placements. However, it would be more difficult to take University of Otago students to Uppsala for 4th-year placement, since the clinical laboratories, and accredited laboratories in general, use Swedish as their operating language. If a placement in a research environment, where the preferred language is English, would be possible, this could be an option.

It might be more realistic to set up student exchange at an advanced level, since both students at University of Otago and Uppsala University perform research projects of various lengths. Furthermore, papers at an advanced level are taught in English at Uppsala University, thus opening up the possibility also for exchange also regarding theoretical papers. Unfortunately, there are quite few students at the post-graduate level in Medical Laboratory Science, both in Uppsala and Dunedin.

Organisation and control over the Programme (Degree)

Uppsala University

At Uppsala University the Biomedical Laboratory Science programme is steered by a Programme committee, consisting of university staff (i.e. paper conveners from different departments), representatives for the profession, student representatives and a representative of the University administration. The committee is chaired by the Course Director, i.e. Birgitta Tomkinson. The Course director represents the Programme in the Board of Undergraduate studies in Medicine (GRUNK), which is chaired by the Deputy Dean. The Deputy Dean represents the Board (GRUNK) in the Board of the Disciplinary domain of Medicine and Pharmacy, where important decisions for example regarding funding, new positions etc that concerns the Disciplinary domain are made.

The Programme committee makes decisions regarding the budget for the programme, but the Board of the Disciplinary Domain sets the frames of the budget, after discussions in GRUNK and other boards within the Disciplinary domain. The Programme committee decides on paper content and syllabus, but decisions regarding changes in the Study plan

(for example new papers or a change in the order or length of the paper) are made in GRUNK. If a completely new Degree or Programme is started the decision is made by the Vice-chancellor (but should be supported by all boards at a lower level). Only decisions regarding major changes in Degrees, for example increasing the Medical programme from 5.5 to 6 years, is referred to the Swedish Higher Education Authority (UKÄ). These fairly short routes for decision making is beneficiary for the programme, as decisions are made close to where they will be implemented.

As the Programme committee is responsible for the budget of the programme, we distribute the allocated means between the different departments in relation to their work load towards the Programme. Since different staff representatives belong to different departments, they also represent their departments in these discussions. However, the departments then have the responsibility for the teachers involved in the different teaching assignments, and the Programme cannot make decisions at the departmental level, we have no say against the Head of Departments.

The Programme committee is also responsible for the quality control and development of the programme. Regular meetings and the composition of the committee ensures that both the student perspective and input from the profession is guaranteed. Exams and evaluation reports for all papers are discussed in the committee, which is important to ensure that the curriculum reflects the need of the profession and that there is a progression between different papers and no unnecessary overlaps. In all, the organisation is very good for coordinating the efforts and control and develop the quality of the Programme over time.

Being the Chair of the Programme committee does not mean that I am responsible for everything. Some responsibilities are delegated to me, for example cross-crediting (together with paper convenors) and exemptions. My assignment is about 5-10% of FTE and there is also a Programme Coordinator (30% of FTE) and a Student Counsellor (25% of FTE) that are heavily involved in taking care of the students and developing the programme.

University of Otago

It has not been easy for me to try to summarise the organisation of the Degree of Medical Laboratory Science at the University of Otago, and I can eagerly admit that I do not fully understand it. I will therefore just focus on some organisational differences that I have noticed, and which I feel can make the administration of the programme more complicated.

The Course Director Dr Heather Brooks (40% of FTE) takes a large responsibility for the Degree as a whole. Compared to Uppsala, the Course Director at University of Otago appears to be responsible for both what the Course Director, the Programme Coordinator and the Student Counsellor do at Uppsala University. However, the course director has good administrative support (80% of FTE). The Department of Pathology and therefore the Head of Department is also responsible for some aspects for running the programme, in particular budget issues. There is also a Board of Studies for Medical Laboratory Science. However, this board has only three meetings per year. Representatives for the profession (from NZIMILS) and students are part of this Board, which is Chaired by the Head of the Department of Pathology. The Course Director, representatives from Christchurch and

Wellington, academic staff and the Dean of the Medical School are also part of this board. Since there are so few meetings, and a number of them outside normal semester periods, the student participation is low, thus reducing student influence. Only specific questions regarding the Programme is dealt with through this Board, for example Terms for taking exams and admission to the programme (subgroup from the Board).

It is impressive that the Course Director Heather Brooks can manage to have individual meetings with every student during their first semester second year and during their second semester third year. This is something we have discussed at Uppsala University, as a mean to decrease the number of students that are "lost" during our first year. The Course director has also made laboratory visits for the majority of the clinical placements that the students undertake during their 4th year. This is another example of the huge responsibility for the students and the programme taken by the course director.

The chain for making decisions appears to be long and complicated at the University of Otago. For example, revision of a paper requires a decision from the MLS Board of Studies, with input from MCS and NZIMLS and a decision from the Divisional Board. The final decision to be taken by BUGS (Board of undergraduate studies). Introduction of a new paper (or if >25% of the content of a paper is changed), requires that a pre-proposal is taken first through MLS Board and Divisional board. If it is accepted there, a full proposal should then be taken to sustainability assessment (i.e. to check financing). Following that, decisions should be made on the paper proposal in the MLS Board, the Divisional Board, BUGS, the Senate, the University Council and finally in CUAP (the governmental agency, presumably corresponding to UKÄ). This is an extremely long process which will take up to a year or even longer. Just to match the meeting dates for the different boards must be a nightmare. As an outsider it is difficult to understand what motivates this long chain of command. I just presume that it is connected to division of funds within the University, which appears to be a complicated process. It is clear that neither the Course Director nor the Board of studies for Medical Laboratory Science are involved in setting up the budget for the programme as a whole.