IFMRS EXCHANGE SCHOLARSHIP REPORT
Applicant: Ling Oei

Visit to Aarhus University Hospital
Host: Professor Bente Langdahl's clinic
July 2019

As a medically trained researcher/physician I have been enabled to attend the clinical trial facility to generate trabecular bone score (TBS) data. Aarhus University hospital is a high-level clinical research facility with an impressive vast amount of space specifically dedicated to scientific clinical research. There were multiple DXA scanners available with fully dedicated laboratory technicians. I was able to get extensive training and support locally.

The original plan was to perform a pharmacogenomics study of teriparatide response, however, it proved impossible to retrieve these archived scan files during the visit.

Instead I have been enabled to work on two other randomized controlled trials there: Liraglutide effects on bone in type 2 diabetes mellitus patients; and vitamin K supplementation trial for three years related to bone health.

The preliminary results of the vitamin K supplementation trial in osteopenia had shown a possible effect on trabecular parameters of the tibia after one year, as published by the group before. Now however, follow-up data of three years became available. After this period the previously described effects seem to have waned. With the newly generated trabecular bone score from the spine the effect could not be reproduced. A manuscript is being finalized, and is available upon request. Trabecular bone score data were also generated in the liraglutide bone study, where no significant differences in trabecular bone score were found between groups.

The trabecular bone score is a parameter informative on microarchitecture and can be derived post-hoc. Therefore, my experienced gained is very useful and transferable to other studies. In the mean time I have been able to personally secure two big research grants: 400.000 euros local funding for environmental exposure and bone imaging research and 265.000 euros European funding for a PhD candidate on diabetes and bone disease. I will surely apply my expertise on the trabecular bone score in these novel research lines and I also hope to continue collaborating with Professor Bente Langdahl's group.