

# Job description

Position as Professor in Molecular Bone Histology  
and Bone Pathology

Department of Clinical Research, Faculty of Health  
Sciences, University of Southern Denmark and  
Department of Pathology, Odense University Hospital

May 2023

## **1. The vacant position**

The vacant position is a combined post as a professor in Molecular Bone Histology and Bone Pathology and as clinical diagnostic collaborator at the Research Unit of Pathology, Department of Clinical Research, University of Southern Denmark, and as a clinical diagnostic collaborator in the Department of Pathology, Odense University Hospital.

The time is allocated 70 % to university (professor) and 10 % to clinical duties.

The employment is limited to a period of 5 years with the possibility of prolongation.

### **1.2. Qualifications and expertise**

The applicant must be qualified as an experienced, clinically oriented histologist and researcher with thorough knowledge of bone metabolism, regeneration, bone pathology in general, and the treatment of bone diseases. The applicant must have a special interest and documented experience in ageing-related bone changes, e.g., osteoporosis, cancer-related bone changes, as well as rare bone diseases. In addition, the applicant should be familiar with a broad spectrum of histological and gene-based methods to analyse and describe pathological changes in bone and specific cellular compartments.

The applicant is expected to have experience with -and collaboration with - authorities as well as an understanding of and experience with the clinical environment in a hospital department.

The applicant must be well qualified with a strong research profile in the areas mentioned above. Commitment to teaching and the ability to lead a research group, including experience with attaining funding and supervision of master's students, PhD students and postdocs, are required.

Emphasis will be on the applicant's ability to document original scientific production at an international level within the area of bone pathology.

The applicant must submit the following documents in order to be considered for the position:

- An application
- A detailed CV
- Degree certificates (including PhD-diploma) (combined as one single PDF-file)
- A teaching portfolio, which details the candidate's prior teaching experience, teaching skills, and teaching philosophy.
- A research plan which details the candidate's ideas and plans for her/his future research work.
- References
- A complete and numbered list of publications
- 10 scientific peer-reviewed publications, which the candidate considers as most important for the position. Please notice that one PDF- or docx. - file must be attached for each publication

Furthermore, the candidate must document a successful record in obtaining research funding, have practical experience with international research collaboration, be an experienced research leader and be well-connected within the national and international scientific communities of bone pathology. The candidate should also demonstrate effective written and verbal communication skills as well as interpersonal skills.

Documented experience as Head of Research, head of large research projects, head of teaching and other administrative jobs will be an advantage. The applicant is expected to be qualified in academic teaching as an associate professor or equivalent.

### **1.2.1. Obligations**

The professor's obligations will primarily be:

- To consolidate and develop the functions of diagnostic modalities relevant to bone diagnostics in the Department of Pathology, Odense University Hospital
- Research in degenerative bone changes and treatment of thereof.

The fundamental tasks are research (including an obligation regarding publishing/scientific procurement) and research-based teaching (with associated obligations in terms of examination). In this context, research-based public sector consultancy may be added. Furthermore, the tasks may consist of knowledge sharing with society, including participation in the public debate. Moreover, handling of research management, counselling and supervision of assistant professors and researchers and assessment work might be added.

#### **1.2.1.1. Research**

The professor is expected to contribute to the further development the research strategy of the department with special emphasis on cancer related bone changes, ageing and osteoporosis. The research should aim to define predictive markers of disease and support targeted treatment (personalised medicine). The professor is also expected to increase research activity in general and establish collaboration with other researchers at OUH and SDU. The professor should participate in the further development of the scientific fields both nationally and internationally. Also, profiling the field in the public eye will be an important task. Finally, the professor should supervise postdocs, PhD students and pre-graduate students.

#### **1.2.1.2. Teaching**

The professor is expected to be engaged in teaching at the Faculty of Health Sciences.

##### **1.2.1.2.1. Planning**

The Head of Research is responsible for planning the teaching within the department; additionally, the professor is expected to plan his/her own teaching.

### **1.2.2. Other obligations**

The applicant is expected to front bone pathology, specifically degenerative bone changes that affect a large portion of an ageing population. The applicant should also engage in the public debate regarding the epidemiology and prevention of bone disease. Moreover, the applicant is expected to perform public duties, *e.g.*, chair commissions, boards etc.

### **1.2.3. Management and administration**

The professor is expected to:

- Perform evaluations of other researchers at the Faculty of Health Sciences
- Participate in and chair committees etc., at the Faculty of Health Sciences and other universities.

### 1.3. University position

The professorial position is affiliated with the Research Unit of Pathology at the Department of Clinical Research.

#### 1.3.1. Reference

The professor refers to the departmental management.

Regarding research and teaching, i.e., university aspects, the professor refers to the Head of Department of Clinical Research through the Head of Research of the Pathology Research Unit. Organisational matters in relation to bone pathology with clinical aspects at Odense University Hospital have to be coordinated with the soft tissue and bone pathology team at the Department of Pathology, Odense University Hospital. The professor will be a member of this group.

Employment as a professor requires successful evaluation by an expert panel consisting of a professor from the Department of Clinical Research, taking on the role of chairman, and two external professors.

## 2. Odense University Hospital (OUH)

OUH is one of Denmark's largest hospitals and the only one having all medical specialities collected under one roof.

The hospital comprises the units in Odense, Svendborg and Nyborg, sharing the same board of directors. In total, the staff comprises about 11,000 people. (See [Key Figures](#).)

A new university hospital is currently in the planning stage to be finished in 2025. The new hospital will be located adjacent to the current main campus of the University of Southern Denmark. This co-location of the two institutions is unique in Europe and will facilitate the cooperation between the clinical departments and faculties of University of Southern Denmark.

Further information:

- [OUH's website](#)
- [OUH's organisation](#)
- [Research Strategy 2021 - 2025](#)

## 3. The Hospital Department

### 3.2. Clinical specialities and expertise

Department of Pathology, Odense University Hospital > provides services in pathology, incl. bone and soft tissue pathology.

Geographically, the department provides services at Odense University Hospital, covering the Region of Southern Denmark and, in some issues, all of Denmark.

The department is involved in **Multi-disciplinary Pathology services**:

- Bone and soft tissue diagnostics
- Renal diseases, incl. renal transplants
- Urologic cancer, incl. cancer of the prostate
- Breast cancer

- Lung cancer

### **3.3. Molecular Bone Histology lab**

The Molecular Bone Histology Lab is an integrated part of the Department of Pathology at Odense University Hospital. The group has a small technical staff and close collaboration with the departmental staff collecting data from local and national databases of pathology, national health registries and through collaborations within the Department of Pathology, Odense University Hospital. The Molecular Bone Histology Lab houses the Danish Spatial Imaging Consortium (DanSIC) infrastructure, including state-of-art spatial and molecular imaging methodologies.

The Molecular Bone Histology Lab has made novel discoveries that highlight the supra-cellular organisation of the human bone remodelling processes and how these processes are affected by ageing and diseases such as osteoporosis, multiple myeloma and specific rare bone diseases. Also, the effects of anti-resorptive and anabolic treatment have been described in detail. These analyses have led to the discovery that the initial bone resorption is separated from the bone formation by an intermixed reversal-resorption phase, where the recruitment of a critical density of osteoprogenitors on eroded surfaces are a prerequisite for the transition to bone formation. This transition is delayed during aging and bone disease, which is a major contributor to bone loss.

### **3.4. Management and organisation of the department**

The medical staff of the department comprises 17 consultants, 9 senior registrars and 10 junior doctors.

The department is managed by the Head of Department Tina Green, MD, PhD and Head lab technician Annelise Olsen. Each sub-speciality is headed by a consultant.

The Research Unit of Pathology is a staff function to the departmental management. In addition to aspects of research, it comprises general departmental functions related to strategic planning, quality assurance, teaching, and information to the public. The secretarial staff refers to and is a part of the general administrative staff of the department.

### **3.5. Catchment area and regional functions**

In accordance with the plans issued by the Danish National Board of Health, the department provides all services at the local level (population of approximately 220,000) and all services at the regional level (population of approximately 1.2 million).

### **3.6. Highly specialised functions**

All of the Region's highly specialised services in the field of pathology are situated in Odense, and the department provides specialised functions within the fields of liver pathology, renal pathology incl., kidney transplants, hematopathology, muscle pathology, fetal and placental pathology, and interstitial lung diseases.

The department provides services at the national level regarding metabolic bone disease, CNS pathology, pediatric malignancies, oral pathology, and heart pathology.

### 3.7. Teaching

The Department of Pathology provides teaching and training of medical students, doctors in training, students of lab. technology, PhD-students, postdocs. and secretaries.

### 3.8. Research

The Molecular Bone Histology lab at OOUH was founded in 2019 and currently consists of two lab technicians, a postdoc, an assistant professor, 2 PhD-students, 2 bachelor students, and 5 Master of Science students. The lab hosts frequent visits by international scientists. The group has multiple international collaborations as well as strong local collaborations with the departments of endocrinology, nephrology, orthopaedic surgery oncology, haematology, genetics, and pathology.

The Research Unit of Pathology collaborates with several other units and departments at OOUH, several departments at SDU, regional hospitals, and has national as well as international contacts.

The fields of interest focus on bone remodelling and regulatory mechanisms that control bone formation and breakdown. Please refer to The Research Unit of Pathology.

## 4. Faculty of Health Science

The [Faculty of Health Science](#) is one of five faculties at the University of Southern Denmark. The faculty offers a grand variety of bachelor- and master's programs. (For further details, please see [Programmes](#).)

## 5. Department of Clinical Research

The [Department of Clinical Research](#) comprises [>45 research units](#) based on departments at Odense University Hospital and Mental Health Services in the Region of Southern Denmark. (For more information about the department's research, please see [SDU's Research Portal](#).)

The department staffs teach at all the programmes offered by the Faculty of Health Sciences, however, primarily in medicine. (Read more about the department and its key figures [here](#).)

Professor Kirsten Ohm Kyvik, MD, PhD, MPM, heads the department.

## 6. Living and working in Denmark

The [International Staff Office](#) (ISO) at SDU provides a grand variety of services for new employees, guests and people who are considering applying for a job at the University of Southern Denmark. Among other things, the staff answers questions concerning [salary](#), [taxation](#), [housing](#) and [accompanying family](#). For further information on what it is like working at SDU, please read "[10 good reasons why you should choose SDU](#)". Additional information about working in Denmark can be found at [Work in Denmark](#).