



A **Postdoc** position is available at the **Biomedical Materials Focus Area** focus area of the **Regenerative Orthopaedics Program** of the AO Research Institute Davos (ARI).

**Topic:** Interaction between immune cells and **biomaterials**. The successful candidate will be studying how neutrophils and macrophages interact with biomaterials, determining the interplay between chemical composition, bulk and local mechanical properties and surface topography on inflammation. This knowledge will be then harnessed with advanced biofabrication techniques to create biomaterials constructs triggering a "healthy" inflammation with the ultimate goal of improving regeneration of musculoskeletal tissues after trauma and disease. This project is closely connected with numerous other projects within ARI.

**Requirements:** The candidate must be **very self-motivated** and have a strong interest in the research topic. The ideal candidate holds a **PhD degree** in Biology, Biomedical Engineering, Health Sciences and Technology, Materials Science, or similar disciplines, has **excellent laboratory skills** in cell culture and preparation of biomaterials-based constructs, biochemistry assays, proteomics; confocal microscopy; previous experience with laboratory handling of immune cells, 3D (bio)printing, chemical modification of **biopolymers**, is a plus.

**Eligibility to apply and obtain a Visa** for temporary residence in Switzerland is **essential**.

We require good English language skills, a work ethic suitable to the challenges we plan to offer. Familiarity with a cross-cultural/interdisciplinary environment is an advantage.

**What we offer:** Training at the forefront of biomaterials research in the context of a world-renowned musculoskeletal research institute; a challenging and rewarding research and educational program within a unique global organization based in Davos that offers urban flair in a pristine natural environment; a wide international network with the best scientists in the field, support searching for accommodation; networking opportunities to prepare the candidate for the next step in her/his career.

#### **About the workplace**

ARI's **Biomedical Materials Focus Area** is committed to designing advanced biomaterials and the development of manufacturing technologies for improved musculoskeletal disorders therapies.

We create polymeric biomaterials that react to environmental stimuli, that interact with cells and tissues and that are amenable to cutting-edge biofabrication technologies.

The **AO Research Institute Davos'** (ARIs) purpose is to advance patient care through innovative orthopaedic research and development concerning musculoskeletal, spine and cranio-maxillo-facial trauma, degenerative musculoskeletal diseases, infections, and congenital disorders.

**Location:** ARI is in Davos, a renowned Swiss mountain resort which is a paradise for winter and summer mountain sports: <https://www.davos.ch/en/>

Besides ARI, Davos is home to other important Scientific Research Institutions: <https://www.sciencecity.ch/>

The preferred **starting date** is the first quarter of 2021. For more information please do not hesitate to contact Prof. Dr. Matteo D'Este [matteo.deste@aofoundation.org](mailto:matteo.deste@aofoundation.org). The application consisting of motivation letter and CV can be sent to the same email address.