

# “Ask Big and Important Questions”

**Alexey Amunts chose to start his lab at SciLifeLab because of the possibilities he saw in the research environment.**

Alexey Amunts uses cryo-EM to visualize macromolecules at atomic resolution. His group explores macromolecules that play key roles in fundamental and medically relevant cellular processes, such as the mechanism of protein synthesis in mitochondria.

“The cryo-EM method has made it possible to reveal complex cellular systems that we lacked the tools to investigate before, and there is a whole new nanoscale universe waiting to be explored, so it is a very exciting time to be in this field.”

He started out by doing his PhD at Tel Aviv University in Israel, where he used X-ray crystallography to visualise plant photosynthetic complexes. After that he moved on to a postdoc position at the MRC Laboratory of Molecular Biology in Cambridge, UK, to investigate ribosomes using cryo-EM.

When Alexey Amunts got the opportunity to set up a cryo-EM lab at SciLifeLab, he took it. One of the reasons was the many strong advantages that he sees with the Swedish research environment.

“The grant schemes in Sweden have a tradition of supporting ambitious initiatives, those where you don’t expect the results to start appearing within 2-3 years. This is particularly important, because it allows to navigate a research group through difficult periods. This consideration is crucial when one is looking for a place to set up a lab because finding a productive direction takes time.”

His lab is located close to the SciLifeLab cryo-EM, mass spectrometry, and drug discovery facilities.

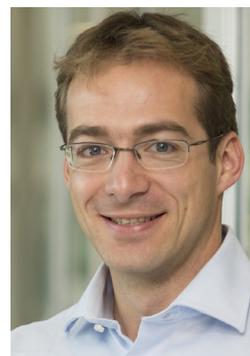
“There were three main things that made SciLifeLab so attractive to me: the infrastructure support, the network of collaborations, and most importantly the wide spectrum of young talent.”

When Alexey Amunts reflects on the Fellows Program he highlights its snowball effects.

“SciLifeLab recruits fellows from leading institutions abroad and gives them an unprecedented degree of freedom as well as tools to create. But what I think is even more important is that by establishing new technologies the Fellows attract bright postdocs and PhD students that otherwise would not consider coming here. This makes not only a major contribution to the current research environment, but will also have a long-term effect on the Swedish science and society.”

His advice to researchers who are about to become independent investigators is to ask big and important questions that will take them into uncharted territories.

“Even if pursuing those questions might be risky, you will get an opportunity to expose new worlds with even more interesting questions, and eventually have better chances to make a unique contribution to science.”



Alexey Amunts

Photo: Neil Grant

## SciLifeLab – a national resource

SciLifeLab is a Swedish research center within molecular biosciences with focus on health and environment. It is also a national resource with the mission to develop, use and provide advanced technologies. The center infrastructure encompasses a multitude of biomolecular technologies and bioinformatics services.