

# CCR – Lecture Series

Monday, February 16<sup>th</sup>, 2025, 13:00 PM

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### The importance of selenium intake, selenium status and selenoproteins for tumour development and cancer mortality

The trace element selenium (Se) is essential for the biosynthesis of a small group of human proteins encoded by 25 different genes in our genome. The selenoprotein family includes proteins involved in the quality control of newly synthesised proteins, enzymes that contribute to our antioxidant defence mechanisms, and enzymes that control our thyroid hormone metabolism. The expression levels of our selenoproteins depend largely on our dietary intake of this trace element, which appears to be limited in certain regions of the world, including parts of Africa, Asia and Europe. Low Se intake is associated with a higher risk of certain cancers, and increased mortality is observed in cancer patients low in Se status. Randomised controlled intervention studies with selenium supplements have yielded ambiguous results, partly because the participants were not selected for baseline Se deficiency. This presentation will outline the current state of selenium research and explain the extent to which Germany and Austria can be considered selenium-deficient regions where there is a risk of increased cancer incidence and mortality due to preventable selenium deficiencies.

**Venue:** CCR Lecture Hall, Borschkegasse 8a

**Time:** Monday, February 16<sup>th</sup>, 2026 at 13:00 PM

**Host:** Andrea Gsur & Stefanie Brezina



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