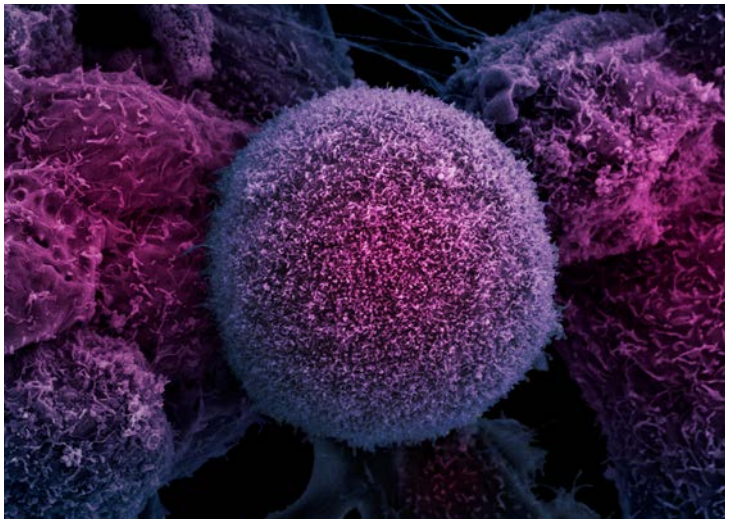


X-RAY ON

Crystals against cancer

Dr. Anders Friberg is holding a tiny protein crystal on the tip of the needle in his left hand. Using an X-ray device, he can determine the molecular structure of the protein/active substance complex. The structural biologist at Bayer in Berlin is searching for a new drug candidate to treat cancer. He and his colleagues have produced this crystal which contains, in addition to the protein, the potential active substance. Based on the experimental X-ray data they can produce a 3D model of the complex. Thus, X-ray crystallography can play an important role in drug discovery. If an active compound binds to the target protein, it inhibits – in this case – the protein's activity and exerts the drug's action. Using structural analysis, the experts can identify the substance's potential for binding at an early stage and use this information to optimize new drug candidates.



Fighting tumors: Bayer researchers are searching for new active ingredients to treat cancer. The objective is to halt the growth of tumor cells such as prostate cancer cells.