

Dame Carol Robinson Opened a New Era for Protein Analysis and Drug Development

MUNICH, GERMANY, June 25, 2024

/EINPresswire.com/ -- • The British chemist is honoured for her groundbreaking work in mass spectrometry, advancing drug discovery and personalised medicine

- Her innovative techniques have significantly improved the study of proteins, offering insights into their complex structures and interactions



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets



British scientist [Dame Carol Robinson](#), Professor of Chemistry at the University of Oxford and a trailblazer in the field of mass spectrometry, has dedicated her career to exploring the molecular makeup of proteins within their native environments. Her pioneering work has paved the way for significant advancements in the realms of drug discovery and personalised medicine. For her extensive contributions to blood analysis and drug development and a career that has broken new ground in biochemical research, the European Patent Office (EPO) is proud to announce Dame Carol Robinson will receive the Lifetime Achievement Award during the European Inventor Award 2024 ceremony on 9 July in Malta.

A new era for biochemistry

Dame Carol Robinson's introduction of mass spectrometry to structural biology has improved our understanding of protein interactions. Mass spectrometry is an analytical tool that enables the detection of molecules and so helps scientists identify the composition of chemical substances, including proteins. This detailed analysis enables a deep dive into the intricate world of proteins and is used to study protein complexes that are often the targets for new drugs. "As a scientist, I've always been quite fearless about going in my own direction. That has been my mantra throughout my career. I never wanted to follow the crowd", Robinson explains, reflecting her pioneering spirit that led to the discovery and analysis of complex protein assemblies.

Her early work faced scepticism, as it challenged the prevailing belief that proteins could not maintain their structure outside of water. However, Robinson's determination and innovative approach proved that protein interactions could indeed be preserved and studied in the gaseous state.

Pioneering personalised medicine

Robinson's 'native mass spectrometry' method has transformed the study of proteins. This technique preserves proteins in their natural state, allowing scientists to gain detailed insights into their functions and interactions without altering their structures. It enables precise measurements and analyses of protein complexes that play critical roles in various diseases. This breakthrough paves the way for the development of targeted medications that can address disease mechanisms more effectively than ever before.

"The future vision for this field is to contribute to much more tailored, personalised solutions. The depression example is a very good one because we really don't have a clear idea of what's wrong in many depression cases. That was what drove a whole programme of research", Robinson explains.

Beyond her academic and research milestones, Robinson's entrepreneurial aspirations also led her to co-found [OMass Therapeutics](#). This venture leverages her mass spectrometry innovations to develop novel drugs targeting membrane proteins and protein complexes implicated in disease, such as the MC2 receptor in congenital adrenal hyperplasia, a rare endocrine disorder. Robinson's innovative application of mass spectrometry in drug development is improving the probability of success against hard to drug targets in diseases with high unmet medical needs. Her work not only advances scientific understanding but also provides the foundation for new therapeutic strategies that could improve the lives of patients worldwide.

Her career also stands as a pillar for gender diversity in STEM, breaking barriers as the first full female Professor of Chemistry at both Oxford and Cambridge Universities, and her commitment to mentorship has inspired numerous postgraduate students and early-career scientists. She is the director of the Kavli Institute for Nanoscience Discovery at the University of Oxford. In recognition of Robinson's lifelong dedication and her role as a mentor, Dame Carol Robinson has received numerous accolades, including being made a Dame Commander of the Order of the British Empire, a Fellow of the Royal Society and a Foreign Associate of the National Academy of Sciences USA. The European Inventor Award 2024 for Lifetime Achievement not only celebrates Robinson's scientific achievements but also her profound impact on the scientific community and society at large.

The EPO will announce the winners of the other categories, whose finalists have recently been unveiled, during [a ceremony livestreamed](#) from Malta on 9 July 2024. In addition to each category, the EPO will reveal the Popular Prize winner, chosen by online public vote. Voting will remain open until the day of the ceremony.

Find more information about the invention's impact, the technology and the inventor's story [here](#).

Media contacts European Patent Office

Luis Berenguer Giménez
Principal Director Communication / EPO spokesperson

EPO press desk
press@epo.org
Tel.: +49 89 2399-1833

About the European Inventor Award

The European Inventor Award is one of Europe's most prestigious innovation prizes. Launched by the EPO in 2006, the award honours individuals and teams, who have come up with solutions to some of the biggest challenges of our time. The European Inventor Award jury consists of inventors who are all former finalists. To judge proposals, the independent panel draws on their wealth of technical, business, and intellectual property expertise. In 2024, the jury is chaired by Wolfgang M. Heckl. All inventors must have been granted a European patent for their invention. Read more here on the various categories, prizes, selection criteria and livestream ceremony to be held on 9 July in Malta.

About the EPO

With 6,300 staff members, the European Patent Office (EPO) is one of the largest public service institutions in Europe. Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in up to 45 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.

*Important note

B-roll materials of the inventor/invention (<https://tinyurl.com/y6pnpf2x>)

Picture materials of the inventor/invention (<https://tinyurl.com/4p75sc4r>)

Luis Berenguer Giménez
Media contacts European Patent Office
+49 89 23991833
press@epo.org

This press release can be viewed online at: <https://www.einpresswire.com/article/722464255>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

