

## Cell death pioneer wins Agilent thought leader award

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**Singapore:** Dr Junying Yuan, a pioneer and leading researcher in the field of cell death at the Chinese Academy of Sciences, has received an Agilent Thought Leader award in recognition of her scientific contributions to cellular biology and the understanding of neurodegenerative diseases.

Dr Yuan heads the Chinese Academy of Science's newly established Interdisciplinary Research Center on Biology and Chemistry. She plans to use Agilent's integrated biology technologies to expand her metabolomics-based approach for studying neurodegenerative diseases and gain deeper insights into neurodegenerative processes.

"Integrating our metabolomics data with transcriptomic and proteomic data will allow us to better study disease pathogenesis by more fully understanding underlying disease biology," said Dr Yuan. "Our aim is to identify five to 10 protein targets or biomarkers for neurodegenerative diseases within the next three years."

Dr Yuan and her team, headed by mass spectrometry specialist Dr Zhengjiang Zhu, seek important insights into the complex interactions of metabolite-protein, protein-protein and genetic networks involved in the etiology of neurodegenerative disease.

Dr Yuan's research has uncovered many significant distinctions in the multiple cell death mechanisms, including programmed cell death (apoptosis) and necroptosis elicited by external factors such as infection, toxins or trauma (necrosis). Her recent work focuses on the identification of necrostatins, a family of small molecule inhibitors of necroptosis, which is a regulated necrotic cell death mechanism.

Dr Yuan also holds a professorship in cell biology at Harvard University and has published more than 160 peer-reviewed journal articles. She is a member of the American Academy of Arts and Sciences and a fellow of the American Association for Advancement of Science.

"Researchers using an integrated approach to the study of biology are gaining significant insights into the complex interactions between genes, proteins and metabolites, which are accelerating the discovery of new therapies to treat serious

neurodegenerative disorders such as Alzheimer's and Parkinson's disease," said Mr Patrick Kaltenbach, Agilent's vice president and general manager of the LC/MS business. "We are honored to support Dr Yuan and the Chinese Academy of Sciences in their pioneering research in this area."