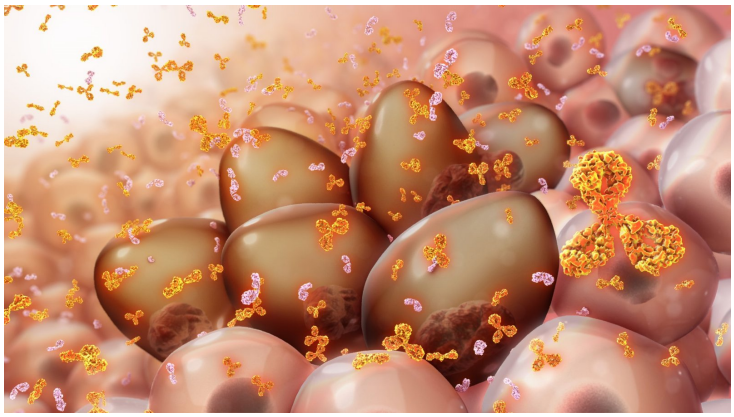
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"Proteona Oncology Challenge" won by AI-driven multiple myeloma study

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Clinician scientist studying Innovative AI-driven genomic and proteomic analysis platform for improving cell therapy and immuno-oncology has been awarded the grant



Proteona Pte. Ltd. has announced the results of the first Proteona Oncology Challenge, co-sponsored by NovogeneAIT. The grant was awarded to Dr Cesar Rodriguez Valdes, an assistant professor at the Wake Forest School of Medicine and a leading Hematologist based in Winston-Salem, USA.

Multiple myeloma is the second most common blood cancer in the US. Despite recent improvements in patient outcomes thanks to newly available therapies, it remains one of the blood cancers with the poorest prognosis. In the US alone it leads to 12,960 deaths annually.

As of now, there is no cure for multiple myeloma. The patients need to be carefully monitored and managed to keep cancer in check. It is not an easy task, because myeloma cells are highly heterogeneous, and patients regularly relapse. The continuous need for medication also makes myeloma an expensive disease to manage.

One key challenge in treating multiple myeloma is therapy selection, especially for relapse patient. It is infeasible to conduct a head-to-head clinical comparison of all possible drug combinations, simply because of the large number of choices. Therefore, the current clinical decision making relies heavily on the knowledge and experience of the clinician. Tools that can help clinicians to make data-driven choices will be extremely valuable.

Dr Rodrigeuz Valdes's proposal aims to tackle the issue of treatment selection for multiple myeloma. By applying single-cell proteogenomics in his patient-derived 3D organoid model, he will compare cell populations in response to multiple drugs, identifying the difference in protein and gene expression patterns. These studies will help to elucidate the mechanism of drug sensitivity, and potentially help to choose the suitable therapeutic combination for each patient.

"We are excited about combining Proteona's single-cell proteogenomic analysis with our patient-derived organoid screening platform," said Dr Rodriguez Valdes. "Our ambition is to develop a predictive, validated test that will facilitate clinical decision-making and improve the outcome of multiple myeloma treatment. This grant will help us to move closer to that goal."

Since its launch in September 2019, the Challenge has received numerous submissions from all over the world from different fields of oncology. “It has been a difficult decision to make,” said Proteona CEO, Andreas Schmidt. “We have seen many excellent, high-quality projects, each addressing an important clinical question. We had to take into consideration different factors including availability of samples, expected time to clinical impact, and feasibility. We actually decided to expand the original grant and to give out additional awards to recognize some of the best proposals. We are excited about working with these top teams, and use the in-depth information from the single-cell proteogenomic analysis to bring their projects closer to clinical application.”

The Proteona Oncology Challenge awardees include:

Grant winner: Dr Cesar Rodriguez Valdes - Wake Forest School of Medicine, USA

Runner-up: Dr Sanjay de Mel - National University Cancer Institute, Singapore

Finalists:

Dr Nicholas Gascoigne – National University of Singapore, Singapore

Dr Steve Bilodeau – Université Laval, Canada

Dr Aaron Tan – National Cancer Centre Singapore, Singapore