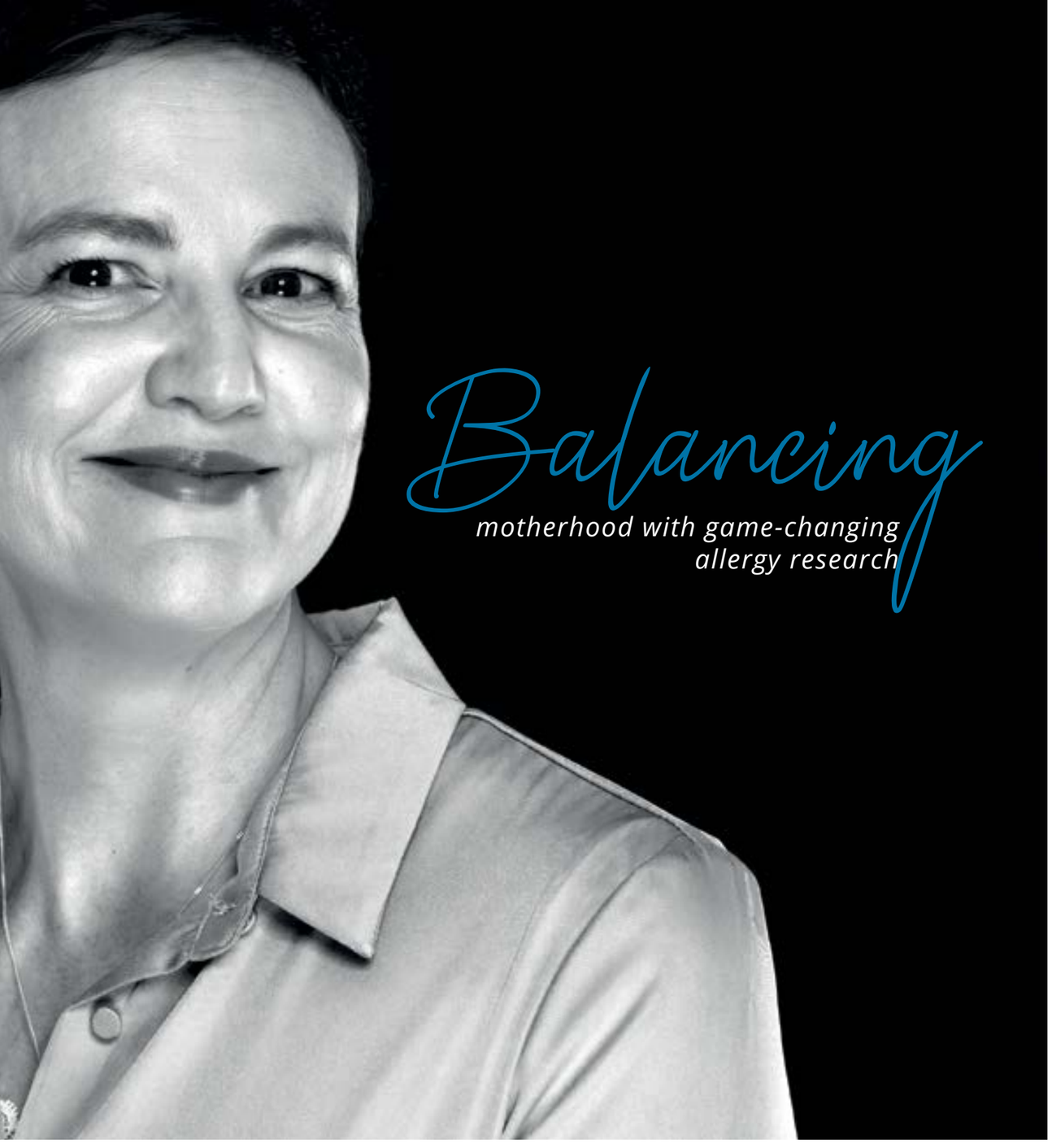

Balancing

motherhood with game-changing allergy research

DR JANET VAN DER WALT

Academic Fellowship Award

Allergies and clinical immunology

University of Cape Town

Allergologist, Dr Janet van der Walt, from Durbanville, sees the suffering of people with severe allergies daily and decided it was time to tackle some gaping scientific knowledge gaps to improve their treatment.

"Every week, we see people who struggle with symptoms like their lip or tongue swelling (angioedema) or more commonly, urticaria, (hives), which causes unbearable itchiness, resulting in sleep deprivation, and a swollen, blotched appearance, with all the social stigma that it involves. It can make people extremely anxious and becomes a huge factor in their lives," she says.

Professor Michael Levine, a peadiatric allergology consultant at the Red Cross War Memorial Children's Hospital in Rondebosch, piqued her interest in allergology after she attended his lecture.

I'd been a family doctor for 25 years and was practicing in Cape Town's northern suburbs. Professor Levine pointed out that there was nobody who did allergy as a specialisation. I wanted to be good at something specific and improve myself. For years I'd been raising small children and this was something I felt I could now do.

Balancing family and research

Not that her child-raising days are over. Her two sons turned 15 and 12 and her daughter eight, in 2019. She's worked part-time as a family physician, while raising them.

"I was always hopeful that I'd be able to find funding for this very specific, niche field, which is so under-researched. I feel I can make a significant difference if my work succeeds," she adds.

She is only the second Family Medicine specialist with a sub-specialty in allergy in South Africa – the disease specialisation itself was registered six years ago.

The equation is disturbingly familiar in South Africa. In this case, the equation is alarmingly unbalanced with just 12 allergologists to deal with an escalating burden of allergy-related diseases, possibly driven by urbanisation, pollution and the high prevalence of additives in preserved foods. Add poverty and the accompanying change to diets, and you have the development of worrying levels of asthma and other allergic disease, such as urticaria.

Janet wants to increase the knowledge base among her colleagues to render them more effective in managing allergic patients at a lower cost, with fewer hospitalisations.

Her MPhil research is driven by the increase in urticaria (hives) and angioedema (swelling of deep skin and mucosal layers, sometimes with life-threatening airway constriction), in local clinics. She had been working as a volunteer at the University of Cape Town's Division of Allergy and Clinical Immunology − which was recently certified as an international centre of excellence for urticaria and angioedema. It's the first centre of its kind in Africa and one of only 60 globally.

While some patients react very well to high doses of anti-histamines, about half don't get much better. Other treatments, (including a very strict diet), sometimes work, but the medicines are extremely expensive and often difficult to access. Together with her supervisor Professor Jonny Peter from Groote Schuur Hospital, Janet wants to find the best all-round treatment. She hopes to define the burden of food-additive-induced urticaria and angioedema in Cape Town, using oral provocation testing. Additionally, she wants to determine the diagnostic accuracy of existing basophil activation testing for food-additive sensitisation and the relationship between food-additive sensitivity, H-pylori infection and alterations in gastrointestinal permeability in food-additive challenged urticaria and angioedema patients.

A layman's guide

"We will do a thorough work-up to exclude any allergy to normal foods like eggs, beef and fish. Then you look at patients' background allergy history to aeroallergens as well. Once you have excluded other causes, you go to the specialised tests, using various preservatives to see if patients' cells react. We measure the amount of inflammatory substances that the cell releases and then correlate that with the oral food challenges,"
she explains.

Close monitoring of vitals and lung functions, plus checks for swelling every hour is important, with resuscitation equipment always on hand. A team including other doctors and researchers, led by Professor Peter, will then compare the physical reactions they observe with the blood tests. Demonstrating a very high food-additive driven burden of disease will have a direct impact on patient management, locally, and potentially, internationally.

Adds Janet enthusiastically; "We'd then be able to push government to improve food additive regulations and labelling in South Africa, not to mention begin nation-wide advocacy and educational campaigns."