

My life has been a series of near-death experiences and resuscitations. I've had three almost fatal incidents and I've been able to, like my plants, resurrect, dry down, resurrect, and dry out again

Jill Farrant

The 16th icon in the second season of 21 Icons is **Jill Farrant**, a scientist and professor of molecular and cell biology at UCT specialising in plant responses to water-deficit stress.

The 21 Icons portrait features Farrant being doused with water, a reference to her nickname, Queen of Rain, and pays tribute to her work with drought-tolerant "resurrection plants", which are able to return to life after being denied water for prolonged periods.

In an intimate conversation, Farrant talks about growing up in a small village in Limpopo and her fascination with outdoor exploration.

"It was a time of discovery and being allowed to explore nature."

Today, she is a pioneer in the field of plant molecular and cell biology, and has made a global impact with her research into "resurrection plants" - extraordinary drought-resistant plants that magically "come back to life" from a dried up, death-like state just 24 hours after being given a mere drop of water.

"Growing up on the farm, I had special places that I often visited. One of these places was called the flat rocks. I noticed a lifeless plant one day, and then it rained, and two days later when I returned to the river bed, it was very green and alive again.

"I thought: 'There's something magical happening down by the river.' The effect of my encounter was something I wasn't conscious of at the time, but after I completed my PhD at the University of KwaZulu-Natal, I elected to change research fields from investigating the causes of desiccation sensitivity in recalcitrant seeds to mechanisms of desiccation tolerance in vegetative tissues of resurrection plants.

"This was encouraged when my memory triggered a diary entry I'd made, noting my discovery of a seemingly dead plant and watching it return to life after being rehydrated following a heavy rainfall. And then I went and collected the resurrection plants from that farm and the surrounding area, and I began an entirely new line of research I'm still involved in today."

Farrant is trying to identify and replicate the genes that help these "resurrection plants" defy death. With the goal of providing food security to billions of impoverished people worldwide, she and her team at UCT are learning from nature's wisdom. Her research has contributed to the understanding of mechanisms used by resurrection plants to tolerate desiccation.

This knowledge has been fundamental to identifying characteristics (genes) that might be important for use in bioengineering crops for improved drought tolerance.

The plants that are able to be revived and live again are a mirror

Rain Queen



ICON
Professor Jill Farrant during the portrait shoot in De Waterkant, Cape Town. PHOTO: GARY VAN WYK



TRUE AFRICAN Jill Farrant says Africa is in her blood. PHOTO: GARY VAN WYK

THE RAIN MAKER



PHOTO: ADRIAN STEIRN, 21 ICONS

could. I've been given job offers to many places, but for me this is home and this is where I want to make a difference."

Farrant has an abundance of awards and accolades, including the top science award from the department of science and technology. She was also the first woman in life sciences at UCT to be granted the coveted academic A-rating, which acknowledges academics who are "unequivocally recognised by their peers as leading international scholars in their field".

She was the African/Arab states recipient of the 2012 L'Oréal-Unesco Award for Women in Science, one of only five scientists worldwide who were selected by an international jury as "researchers who will have a major impact on society and help light the way to the future".

Of living in the present, she says: "We must celebrate our diversity and work with it."

● Watch Jill Farrant on SABC3 at 8.27pm today

● For more information, visit 21icons.com

to Farrant's personal life.

Despite enormous academic and professional successes from an early age, Farrant has battled with alcoholism, hit rock bottom and has had stints in rehabilitation after relapsing.

But somehow, she has turned her life around.

With purpose, she is today more committed to her research and students than ever before, and arguably the most progressive

BEHIND THE ICON

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woman in the scientific world today.

Farrant says she could live and work anywhere in the world, but South Africa has captured her soul.

"There's something about Africa and South

Africa that's just in my blood. There is something about this place that is me. There's a heartbeat here and a spirit. It's a continent on which humans evolved, really, and it's home. I don't ever want to leave, and I



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