



**‘An entrepreneur
must be prepared
to take risks’**

He came to the Netherlands from Costa Rica to do a Master's in Biotechnology, and never left again. A passionate scientist, Carlos Cabrera went down the entrepreneurial route with his own technology for reusing valuable substances from waste streams. 'You've got to be prepared to take steps in a direction without knowing whether it's the right one.'

TEXT KENNETH VAN ZIJL PHOTOGRAPHY ERIC SCHOLTEN

His Dutch is good enough to have a chat with the neighbours but if he's going to talk about chemistry and his company, Greencover, the Panamanian-born Costa Rican Carlos Cabrera would rather do so in English. The interview takes place in a small office on the Wageningen campus, hung with posters showing amino acids and a chart of flavour compounds. Cabrera talks fast and with verve. It was here in 2018 that he started Greencover, a company that extracts useful components from the food industry's liquid side streams. 'With those components you can make products with a lower CO₂ footprint than you can with existing production techniques. What is more, you can reduce the waste streams like this.'

Cabrera picks up a tiny flask from his desk. A delicious smell of ripe bananas rises from it. 'We produced this aroma compound for a client who is looking for a more sustainable production process for a banana flavouring and aroma. We helped him by combining

his side stream, excess alcohol, with a side stream from the vinegar industry. Then we used our own technology to produce the aroma, an ester called isoamyl acetate. Early this year, just before the lockdown, we produced and delivered the first kilograms of this banana essence.'

LICENCES

Cabrera is reluctant to say much about exactly what the company's own technology consists of. Laughing, he says: 'Let me say that we extract carboxylic acids from side streams by playing with the pH and CO₂. In collaboration with the university, we have also developed a process for separating amino acids from side streams.' He uses both the carboxylic acids and the amino acids to manufacture flavourings and nutritional supplements. Greencover now has licensing agreements with various companies for a range of applications of the technology. Cabrera's young company also recently won the AtlasInvest Entrepreneurship grant, >

Carlos Cabrera



a start-up award of 35,000 euros for commercially promising companies. Five people now work for Greencover, including the co-founder and commercial director, a financial manager and two Delft University-educated engineers. Cabrera is the managing director. On the side, for one day a week, he assists on the online course Chemistry and Technology for Sustainability run by the Biobased Chemistry & Technology chair group. Even as a young student of Chemical Engineering in Costa Rica, Cabrera was already interested in the idea that waste streams contain a lot of useful components. 'I wanted to go abroad to learn more about how you can reuse side streams.' In 2009, Cabrera received a grant from Nuffic, the Dutch organization for internationalization in education, to do the Master's in Biotechnology at Wageningen.

'In my Master's I used the same equations as in chemistry, only now it was in relation to living micro-organisms. Ultimately, everything comes down to chemistry: humans,

life. It was an eye-opener to me to see how these chemical principles can be applied to living organisms.'

His plan was to return to Costa Rica after two years. 'Now I've been living in Wageningen for over 11 years. When my daughter was born here, I even applied for Dutch citizenship. Not long ago, I officially became a Dutch citizen. I am very happy here.'

**'In Wageningen
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HAPPY PEOPLE

The Dutch mentality did take a bit of getting used to at first, though. 'The people of Costa Rica score high on the list of happy people. I think that has to do with Costa Rican people's attitude to things. They take life more as it comes. Whatever happens, you always try to look on the bright side. Even when there's a power cut, for instance

‘It was an eye-opener to me that chemical principles can be applied to living organisms’

– which happens often in Costa Rica. In the Netherlands people are a bit more blunt and uptight about things. Actually, I am only half Costa Rican. My father is Panamanian and my mother is Costa Rican. I was born and grew up in a border town in Panama.’

‘From the Dutch perspective, Costa Rica and Panama are probably similar countries,’ says Cabrera, ‘but when I was growing up they were totally different. Costa Rica had no army, while Panama was a military dictatorship led by the army chief Noriega. It was very dangerous to criticize the junta.’

‘I have a memory of fleeing to Costa Rica with my mother when I was five, because the Americans attacked Panama to take out Noriega. I think it taught me that a society is more fragile than we think in many ways, and that it doesn’t take much for everything to change.’

IMPOSTER SYNDROME

Cabrera comes across as a scientist at heart, which doesn’t make entrepreneurship an obvious choice. He admits that there is a big difference between a scientist and an entrepreneur. ‘If you go down the science route, you can map out a path from Bachelor’s to Master’s to your PhD. And when you’ve written four articles, you get your doctorate. As you do this, you really run no risks at all. As an entrepreneur it’s quite the opposite. You have to be prepared to take risks, and to set off in a direction without knowing if it’s the right one.’ In their attitudes too, scientists and entrepreneurs can be as different as chalk and cheese. ‘Many young scientists are plagued by imposter syndrome,’ says Cabrera. ‘The feeling that what you do isn’t really good



CARLOS CABRERA

Works: As founder of Greencovery, a company that reuses valuable substances from side-streams
And as a researcher and lecturer at WUR Biobased Chemistry & Technology
Studied: Licentiate in Chemical Engineering, University of Costa Rica, 2008
WUR MSc in Biotechnology, 2011
PhD: Bioprocess Engineering at TU Delft, 2017

enough, which makes you doubt your talent and your research work. I think everyone suffers from this to a greater or lesser extent. But an entrepreneur with imposter syndrome? That won’t work – you’ll just dig a hole for yourself to fall into.’ But Cabrera’s entrepreneurial spirit didn’t come out of nowhere. ‘My mother had 15 brothers and sisters, most of whom had shops, as did my grandfather. In fact, he also had a coffee plantation. I was telling

friends recently how as a kid I used to sell the oranges that dropped from the trees in our garden.’

CREATIVE

When he started Greencovery, Carlos Cabrera benefitted from the Wageningen ecosystem, as he calls it. ‘The university of course, but also the various companies here on the campus and in the Foodvalley. There are many places you can go to with your questions as a starter in business. And in the education and research at Wageningen you are challenged to be creative and expand your horizons. You learn to take your thinking one step further and to imagine new possibilities.’

But the most important places for Cabrera as a bright-eyed new entrepreneur were probably Startlife and Starthub, he says. These organizations support agrifood start-ups. ‘They help you with things like formulating your business plans as clearly as possible. They bring a lot of starting entrepreneurs together who are all working in the same field in different ways. And that is good for developing entrepreneurial skills.’ Cabrera compares the stimulating effect of this to what he saw happening in Costa Rica. ‘If someone starts a bookshop on the corner of a square, in no time a new bookshop opens next door to it. Because someone sees that the first bookshop is very successful, and thinks: why shouldn’t I be just as successful?’

So what if something like that happens in Wageningen? A start-up is set up that competes with Greencovery? For the first time during this conversation, Cabrera pauses for thought before answering. ‘Then we’ll have to be better, more innovative, more creative and faster than the competition.’ ■