A SUCCESS STORY CALLED PREGNOLIA: DETERMINING THE RISK OF PREMATURE BIRTHS

In July 2016, Sabrina Badir, Pioneer Fellow and founder of the start-up Pregnolia (formerly Pregnostics), won the start-up competition Venture Kick 2016 and in May, she received the W.A. De VIGIER Award 2016, the most lucrative and prestigious prize for young entrepreneurs in Switzerland. These distinctions are not surprising when you look at the success story behind them. During her doctoral thesis supervised by Edoardo Mazza, ETH Professor for Mechanics, the 30-year-old biomechanist developed a handy probe that makes it possible to determine early and reliably the risk of a pregnant woman giving birth prematurely, so that the doctor can take measures to save the pregnancy. “Having the probe inserted is absolutely painless, and so is the slight negative pressure,” explains Badir proudly. In scientific literature, it has already been verified that determining the stiffness of the cervix uteri can improve the diagnosis of premature birth. Currently, the device is being tested in clinical trial with a thousand pregnant women at various sites, including the University Hospital Zurich and private gynaecological practices. The kick-off of this success story was set up by the generous support of the Pioneer Fellowship. Ever since, Badir has built a start-up, gained sound footing of about one million Swiss francs in seed capital and established a team consisting of Francisco Delgado (33) and Annette Burggraf (51). Next steps include the clinical validation and the enhancement of the device until it is market-ready. The Pregnolia team is confident that the product will be ready to be launched on the market in the near future.
INTERVIEW WITH PROFESSOR DETLEF GÜNTHER
Vice President Research and Corporate Relations

In your personal opinion, what makes the Pioneer Fellowship so unique?
Take the example of an ETH graduate who has just completed a Master’s or a doctoral dissertation and wants to translate a scientific idea into a business model: for this test phase, she or he receives a fellowship from ETH Zurich that does not have to be repaid – I mean, that’s a truly unique opportunity.

The Pioneer Fellows cover a broad spectrum of subjects. Is there a specific business idea that particularly fascinates you? There are so many good ideas that I’m hard pushed to pick out just one. But the Battrion spin-off improved the lifetimes of batteries by a factor of two. That’s really an unbelievable result.

How important are donations for the programme?
This programme absolutely relies on donations. They allow us to award between six and ten fellowships at present, thereby paving the way for young talent into an entrepreneurial career. For this wonderful support, I’d like to thank the donors.

What status does the programme have compared to other means of supporting start-ups?
Most funding programmes begin only when a business idea has already matured to a certain degree and success is at least possible. My predecessor built up this fellowship programme in order to give groundbreaking inventions a chance from the start.

Since your appointment as Vice-President for Research and Corporate Relations, you have extensively restructured the Pioneer Fellowship programme. What has changed?
I wanted to bring about a situation whereby we could implement a faster “in or out” policy. So now fellowships are not automatically awarded for 18 months. Instead, the Pioneer Fellows receive an assessment of progress from their coaches and mentors after six months. Over the following three months, they have the opportunity to remedy any problems. After that, things can go one of two ways: either the fellowship lasts the full 18 months or the fellow has to finish it after one year.

What is your vision for the future of the Pioneer Fellowship programme?
I would be happy, of course, if we got more donations! Our talented pioneers are very creative and keep on discovering new fields in which to be innovative. But I’m also interested in the university gaining even more alumni who remember the support they got as pioneers and bring back some of the fruits of their success to the university. That can be by sharing their expertise as a coach or mentor – or indeed by making donations.
NEW PIONEER FELLOWS (AUTUMN 2015)

MARCO HABEGGER IMMUPROBE GMBH
Before founding his company ImmuProbe, Marco had already developed the innovative new “FoRe Microarray” testing device during his Master’s degree. The device allows users to test tiny amounts of blood for various proteins in parallel. Because a tiny drop of blood suffices for the test, the young entrepreneur sees big market potential particularly in neonatology and basic research. The testing device should be market-ready in 2017.

“Specifically when developing new drugs, it’s difficult to do without tests on laboratory animals. ImmuProbe is working on a technology that can reduce the number of animal experiments in research by two-thirds, while also improving the quality of the results.”

MICHELA PUDDU HAELIXA GMBH
In May, Michela founded the ETH spin-off “Haelixa”, which wants to bring out environmentally friendly DNA-based marker substances as an alternative to the toxic tracers currently used. Such tracers are used in the petroleum and geothermal sectors, for example, to provide information about oil sources and drilled layers of rock.

“The Pioneer Fellowship allows me to close the gap between research and entrepreneurship. For me, it’s exciting to carry out various roles in a start-up, learn new things and take on interesting challenges every day.”

BENEDIKT WANNEH HETSPRESSO
Benedikt’s goal is to develop an entirely new fully automated synthesising device that will become a standard device in chemical synthesis laboratories. Using this synthesiser, the development of chemical structures such as drugs or materials can be improved and accelerated.

“I’m enthusiastic about how you can translate basic research at ETH into a new technology, which then advances science in its turn. The Pioneer Fellowship helps me to do precisely that – and found a successful ETH spin-off company.”

SOHYEON JEONG & LUBOR LADICKY PHYSICS FOREST
With their algorithm based on machine learning, SoHyeon and Lubor have developed a computer simulation that is able to realistically depict the motion of fluid physical elements, such as water, in real time. “Physics Forest” accelerates simulation without relying on time-consuming calculations, which makes it highly relevant for special effects in movies and computer games.

“The games sold today are based on technologies that were developed over ten years ago. We’re looking forward to soon being able to play games that contain state-of-the-art fluid effects.”
THANKS TO OUR PARTNERS
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more. Thank you very much!

Only thanks to the generous support I was able
to found my own company eight years ago. For
this reason, it’s reasonable that I would like to
give the next generation the same opportunities
I was given. Today’s Pioneer Fellows will be the
leaders in tomorrow’s world. They need our
support to become entrepreneurs, create jobs
and secure our economic future.

Bettina Ernst, CEO and founder of PreClin Biosystems

AWARDS FOR SUCCESSFUL FELLOWS

W.A. DE VIGIER AWARD 2016
Pregnolia

VENTUREKICK 2016
Pregnolia wins and PharmaBiome is
among the finalists

ZKB PIONIERPREIS 2016
Pregnolia and IRsweep among the
finalists

SWISSCOM STARTUP CHALLENGE
2016:
Catcheye and Flashwell among the
finalists

MASS CHALLENGE SCHWEIZ 2016
Aerotain, Distran, rqmicro and Versantis
among the finalists

BEST SWISS START-UPS 2015
7 Pioneer Fellows made the TOP 100
Start-ups: Glycemicon, Noonee, Scrona,
Selfnation, SwissLitho, rqmicro, Versantis

NEWS FEED
NEW HEAD OF IELAB
Tomas Brenner took over the reins of the ETH
Innovation and Entrepreneurship Lab (ieLab) at the
start of this year. The ieLab supports Pioneer
Fellows on their road to becoming entrepreneurs
through individual coaching and provides the
grounds on which innovation, exploration and
translation can thrive.

NEW SPIN-OFF RECORD: ETH AS INNOVATION HUB
Last year, 25 new ETH spin-off companies were
founded, more than in any other year, of which 8
were established by Pioneer Fellows. Of the
pioneers who have completed their fellowships
since 2010, 34 took the plunge and founded their
own company. ETH Zurich’s early support is paying
off. So it’s hardly surprising that the federal
government is planning to integrate the ETH model
into a new Switzerland-wide funding programme.

The new Pioneer Fellows (spring 2016)
Patric Eberle
Patrizia Marschalkova
Lorenz Meier
Zhenzhong Su und Tonio Gsell
Christina Wouters

Contact:
Alex Hochuli
Relationship Management Specialist
+41 44 632 49 08
alex.hochuli@ethz-foundation.ch