



Annual Report 2018 of the Research Fund



SWISS **LUNG** ASSOCIATION



Ladies and Gentlemen,

Last year, thanks to the generosity of our donors, the Swiss Lung Association with its Research Fund was once again able to support numerous research projects into improving lung health.

Since the launch of the Fund in 2012, we have awarded grants to some 35 research projects that seek to make life better in future for people with pulmonary and respiratory-tract diseases. In 2018, we had the opportunity to support a research project on a highly topical issue – e-cigarettes – and play a part in answering the question: how harmful are electronic cigarettes to health? See the following pages for more on this topic.

And now I hope you enjoy reading our Annual Report.

Dominique Favre

Vice President of the Swiss Lung Association

Electronic cigarettes – no answers without research

How much harm do e-cigarettes do to a person's health? Are they a good way to give up smoking or do they make it easier to take up smoking in the first place?

These are questions that demand answers, not least since the publication of the alarming figures on the consumption of e-cigarettes by 11- to 15-year-olds in Switzerland (Sucht Schweiz, 2019). The health consequences of the long-term consumption of e-cigarettes are still largely unknown. One thing is for sure: electronic cigarettes are by no means harmless lifestyle products, as even short-term use can have an adverse effect on health. Moreover, e-cigarettes are not a scientifically recognised aid to giving up smoking. Whether they can still play a supportive role in giving up smoking and so help reduce the harm to an individual smoker's health has not been conclusively demonstrated.

The Swiss Lung Association Research Fund therefore considers it a success that in 2018 for the first time they supported a project that looked into this topic. It

takes precise research to be able to alert consumers to any dangers and offer the most effective protection. After all, lung diseases are the fourth most common cause of death in Switzerland.

The Lung Association is committed to reducing the number of new cases and improving the quality of life of people with respiratory-tract and lung diseases. And because such a goal can only be achieved through increased research in the field of lung and respiratory diseases, in 2012 the Lung Association established the Research Fund in conjunction with the SGP (Swiss Society of Pneumology) and the SGPP (Swiss Society of Pediatric Pneumology). This Fund is financed by contributions from the cantonal Lung League and by donations. Each year since 2013, research grants of some CHF 625,000 have been allocated. 2018 was the second year that a young researcher was awarded a prize worth CHF 10,000 for the best publication in the field of «lung and respiratory tract». The Swiss Lung Association is proud to be able to support innovative projects through the Research Fund.



Development of the Research Fund: Figures from 2018

In 2018, 18 research teams submitted applications for grants totalling CHF 2.9 million. What was unusual was that instead of the full amount of CHF 625,000, only CHF 500,000 worth of grants were awarded. There was a particular reason for this. There are two different programmes under which researchers can apply to the Swiss Lung Association Research Fund.

The «**Type 1**» programme is for research on the topics listed below, where a total of CHF 500,000 is shared between various projects:

- a) Pneumology: Basic research (experimental research) and clinical research
- b) Social medicine/science, health care and health economics
- c) Epidemiology (prevalence, causes and effects of diseases in the population)
- d) Air pollution prevention and air quality
- e) Prevention

In the «**Type 2**» programme, the sum of CHF 125,000 has previously been allocated annually to projects on the following topics:
«Patient adherence and care models to domiciliary, non-pharmacological treatment of chronic respiratory disorders, approaches to improving the quality of advice and supply».

For the first time since the Research Fund was launched, no applications for Type 2 grants were received last year. This meant it was not possible to award the allocated amount of CHF 125,000. As a consequence, the Steering Committee has modified the topic for 2019. The «Type 2» programme is now funding research projects on lung health. Thus in 2019 CHF 250,000 instead of the usual CHF 125,000 will be available.

Spotlight on a completed project

Prof. Dr. med. Jörg D. Leuppi

Better Patient Adherence for Chronic Lung Diseases

In asthma and COPD patients, suboptimal adherence or non-compliance with inhalation therapies has been shown to increase exacerbation rates. The aim of this project was to investigate the effect of an individual measure on adherence to inhalation therapy and to determine the resulting impacts on exacerbations.

The intervention consisted of a daily alarm and reminders by phone if the use of emergency medication doubled or if the medication was not inhaled as prescribed for more than two consecutive days. The study shows that a regular, automated and personal reminder has a positive effect on adherence to inhaled drug therapy in asthma and COPD patients.

The measures led to a significantly reduced exacerbation rate among those affected who were reminded to take

the medication (intervention group). A positive impact on the time until the next exacerbation was not observed. Cost efficiency proved to be moderate.

The Lung Association is already taking advantage of this insight in practice in the «Living Better with COPD» programme. After a coaching session, participants receive a follow-up by phone for nine months to improve their adherence.



Projects newly funded by the Research Fund in 2018

Projects supported in 2018

- **Fighting the Antibiotic Nightmare**
2018-02, Prof. Dr. Peter Sander, University of Zurich, CHF 110,000
- **New Treatment for a Life-Threatening Lung Disease**
2018-14, Dr. Fabian Blank, University of Bern, CHF 178,000
- **Lung Transplant: The Connection between Microbes and Frailty**
018-16, Dr. med. Angela Koutsokera, University Hospital Lausanne, CHF 170,000
- **Are E-Cigarettes Less Harmful?**
2018-17, Prof. Dr. Patrick Schmidlin, University of Zurich, CHF 42,000

Projects completed in 2018

- **Gene Therapy of Alpha-1-Antitrypsin Deficiency**
2014-13, Dr. Izabela Nita, University Hospital Bern, CHF 83,750
- **Nanoparticles: Dangerous for People with COPD?**
2014-15, Dr. Fabian Blank, University of Bern, CHF 133,500
- **What the Dysfunction of Blood Vessels has to do with the Prognosis of COPD**
2014-18, Prof. Dr. med. Daiana Stolz, University Hospital Basel, CHF 69,100
- **Better Patient Adherence for Chronic Lung Diseases**
Prof. Dr. med. Jörg D. Leuppi, Baselland Cantonal Hospital, CHF 95,000

Spotlight on a new project

Prof. Dr. Patrick Schmidlin, University of Zurich

Are e-cigarettes less harmful?

The regulation of tobacco products worldwide is becoming ever more strict, leading tobacco companies to seek out alternatives. With e-cigarettes, they are taking a new approach that supposedly offers a healthier way to smoke.

Patrick Schmidlin and his team of researchers want to find out whether electronically produced smoke damages cells that heal wounds in the oral cavity. To that end, the researchers take representative samples of wound-healing and tissue-repair cells and expose them to smoke in vitro (test tube). The Swiss Lung Association is eagerly awaiting the results, which will become available in the next two years.

For the Swiss Lung Association, the issue of electronic cigarettes is of particular concern. The following is known about it:

E-cigarettes and health

At present, only scientific findings on the short-term use of e-cigarettes are available. These demonstrate that the consumption of e-cigarettes can lead to irritations of the respiratory tract and the eyes. The liquids contain toxic sub-

stances, some of which are carcinogenic. There are also reasonable grounds for suspecting that refill cartridges declared as nicotine-free may also contain nicotine. Nicotine is a substance that can be addictive even in small doses. There is also the danger that the consumption of e-cigarettes merely leads to a shift in addiction.

E-cigarettes and teenagers

The Lung Association is concerned about the spread of e-cigarettes among children and adolescents, because from a preventive point of view it is conceivable that e-cigarettes might lead to addiction and/or make it easier to start smoking. In Switzerland, there are no age restrictions on the purchase of e-cigarettes. Compared to commercially available cigarettes, e-cigarettes are inexpensive and therefore attractive to young people. What's more, flavours are often added to the refill liquids in order to make the product more attractive to young people in particular. Because young people are especially vulnerable to advertising messages, the Lung Association is calling for a strict ban on advertising, promotion and sponsorship activities for tobacco and nicotine products.



Lung Association Research Award 2018



«I would like to thank the Swiss Lung Association very much for the generous award for the Best Publication by Young Researchers. It was a great honour to receive this award as a recognition of my work and as a great motivation to go back into research after my parental leave.»

Rebecca van Dijk-Blom

Wanting to support more researchers who are in the early stages of their career, the Lung Association presented the award for the best publication by a young researcher in the field of respiratory-tract research and lung health for the second time at the 2018 SGP Congress. This award recognises outstanding research projects that

have already been completed. In 2018, Rebecca van Dijk-Blom from the University of Bern was awarded the CHF 10,000 prize for her publication in **Frontiers in Immunology** entitled «**Pulmonary Delivery of Virosome-Bound Antigen Enhances Antigen-Specific CD4+ T Cell Proliferation Compared to Liposome-Bound or Soluble Antigen**».

Behind the scenes



Carmen Aebersold
Deputy Head of Research
Secretariat

During Jenny Herzog's maternity leave from December 2018 to July 2019, Carmen Aebersold is providing administrative support for the research projects of the Swiss Lung Association's Research Fund.

«My work gives me an insight into the exciting world of research into lung health. Alongside my psychology studies, working in a dynamic research environment with a diversity of topics and people is the ideal challenge.»

Thank you very much!

We would like to thank the individuals, institutions and cantonal Lung Leagues who have generously supported the Swiss Lung Association Research Fund with their donations.

We would particularly like to thank the following institutions, which specifically promote or support individual projects:

- Uniscientia Foundation
- SWF Foundation for Scientific Research
- Hans & Gertrud Oetiker Foundation
- Erika Brawand Jucker Foundation



Annual Financial Statement – Research Fund

Payments	Totals 2018	Budget 2019
<i>Annually recurring payments</i>	600 794	870 650
Overheads	100 794	113 150
Secretariat	71 075	73 150
Honorary committee members	16 903	20 000
Other	5 756	20 000
Grants	500 000	750 000
Applications, open procedure	500 000	500 000
Applications, topic-specific procedure	0	250 000
<i>Projects</i>	<i>7 060</i>	<i>7 500</i>
Research platform	7 060	7 500

in CHF

Committee members

A high-calibre Research Committee comprising renowned lung specialists and professionals from Switzerland decides on the allocation of grants from the Research Fund.

President of the Research Committee

Prof. Dr. med. Constance Barazzone-Argiroffo

Head of Pediatric Department, HUG (Hôpitaux Universitaires Genève)

Vice-President of the Research Committee

Prof. Dr. med. John-David Aubert

Senior Physician, Pneumology Department and Transplant Centre, CHUV (Centre hospitalier universitaire vaudois)

Members

Prof. Dr. med. Michael Tamm

Physician-in-Chief, Clinic of Pneumology, University Hospital Basel

PD. Dr. med. Christophe von Garnier

Physician-in-Chief, Inselspital, and Head of Tiefenauspital, University Clinic of Pneumology, Inselspital Bern

Prof. Dr. med. Otto Schoch

Senior Physician, Clinic of Pneumology and Sleep Medicine, Kantonsspital St. Gallen

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Chief Physician, Lucern Höhenklinik Montana

Prof. Dr. phil. et PhD Nicole Probst-Hensch

Head of Department, Epidemiology and Public Health, Swiss Tropical and Public Health Institute, Basel

Prof. Dr. med. Konrad E. Bloch

Deputy Director, Clinic of Pneumology, University Hospital Zurich

Prof. Dr. rer. Pol. Stefan Felder

Faculty of Economics, University of Basel



→ Would you like to know more about the projects we have funded or would you like to get involved in research funding yourself?

Fabian Putzing will be pleased to assist you: 031 378 20 49 or f.putzing@lung.ch

→ **General information:** www.lungenliga.ch/forschung

Information for applicants: www.lungenliga.ch/research

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