Report
2019 – 2020

Society for Cancer Research
Arlesheim • Switzerland

Society for Cancer Research
Hiscia Research Institute

Society for Cancer Research
The primary aims of the Society for Cancer Research are assuring, optimizing and developing holistic cancer therapy on the foundations of anthroposophic medicine and pharmacy.

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Editorial

Dear Readers,

Over the past two years, the number of researchers in the Society for Cancer Research has almost doubled. This has been made possible through legacies, donations and grants. We are very grateful for this as it has enabled us to significantly intensify the research projects in our individual departments.

With this annual report, which covers the two years 2019-2020, we would like to provide you with deeper insights into a selection of research projects that have particularly shaped the Society for Cancer Research during this period. With the exception of the Tumour Biology and Pharmacology Department – which will report new findings next year – every department is represented with at least one contribution.

We wish you an exciting read,

PD Dr. Stephan Baumgartner

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On the Road to the Future

PD DR. STEPHAN BAUMGARTNER AND DR. HARTMUT RAMM
SCR, MEMBERS OF THE BOARD

The world is in a state of change. This is true for the Earth as well as for humanity – think of climate change or the social fractures that are becoming visible in the wake of the Corona crisis. The knowledge we have acquired and the methods we have used will obviously no longer be sufficient in coping with the challenges that we will face in the future. Therefore, the question is: How can we generate new insights that help us to actively and meaningfully shape the necessary change?

Anthroposophic Medicine is based on a holistic worldview which, in addition to the physical-material, sensually perceptible existence of human beings and nature, assumes that there are further levels of organization: first the level of the vital forces and vital energies as we know them from plants, animals and human beings, then the forces of the soul, which are characteristic of the animal and human kingdoms, and finally, the forces of the spiritual and spirituality, which are conscious in human beings exclusively. These three additional dimensions of existence, which can be completely grasped neither with the ordinary five senses nor the usual technical apparatuses, are taken as seriously in Anthroposophy as that which shows itself to us as matter.

For this reason, Rudolf Steiner and Ita Wegman – the founders of Anthroposophic Medicine – spoke of an «extension» of medicine which would include spiritual scientific dimensions. In this annual report we would like to give you an insight into some of our ongoing projects which are working towards such an extension of medicine in terms of method and content.

A possible side effect of a cancer disease and also of its conventional therapy is the so-called «fatigue»: a deep tiredness and exhaustion, which very much impairs the quality of life. From a holistic point of view, this fatigue is associated with changes in the further levels of organization stated above. Probably due to its complexity, this symptom is difficult to treat. Against this background, Florian Pelzer has investigated in a systematic literature review whether mistletoe extracts, whose use in cancer treatment was suggested by Rudolf Steiner, show potential for the treatment of this fatigue.

Maria Olga Kokornaczyk and Paul Doesburg work on holistic examination methods based on pattern formation and form analyses. These so-called «picture forming methods» are based on the basic assumption that organism-specific vital forces are

responsible for both the outer and inner form qualities of organisms – and thus also for their effect as medicinal or food plants. Accordingly, methods that are intended to scientifically assess the level of vital forces must focus on this shape and form specificity. We are evaluating to what extent such methods could be suitable for the early diagnosis of cancer and are also planning investigations into the quality of medicinal plants, also considering the influences of cosmic constellations.

Jakob Maier reports on the framework conditions for the development of new drugs for use in integrative oncology. Due to legal regulations this is still comparatively easy in Switzerland but has become much more difficult in other European countries. Despite a great need for holistic treatment methods on the part of patients affected by cancer and related illnesses there are only a few institutions left in the world that develop new medications for use in integrative oncology.

Jonathan Neisecke performs research on the founding texts of Anthroposophic Medicine and Pharmacy. He reports on how, while searching for material for the book «Mistletoe and Cancer [1]» in the archives of the Society for Cancer Research and the Rudolf Steiner Estate Administration, he came across a rather inconspicuous collection of notebook entries which, on closer inspection, proved to be highly interesting evidence of Rudolf Steiner's working methodology.

The proliferation of mistletoe on orchard trees has led to much criticism and some discussion in recent years, especially in Germany. At the same time, the supply of apple tree mistletoe is threatened by a new type of leaf disease. Hartmut Ramm reports on how the Demeter farmer and orchardist Christoph Surbeck, with the help of the Society for Cancer Research, deliberately planted mistletoe seeds on his apple trees before his death and thus initiated a pioneering project for the coexistence of commercial fruit growing and mistletoe cultivation.

As a pioneer, the Society for Cancer Research played a major role in shaping the beginnings of Anthroposophic Medicine and, looking to the future, sees itself committed to both the preservation and further development of integrative and, in particular, anthroposophic oncology. For this reason we have decided to intensify our efforts even further and to expand them where possible. For this task we continue to rely on your support and are very grateful for any kinds of donations, contributions and legacies. ■

Literature

1 Neisecke J, Ramm H. Mistel und Krebs im Werk von Rudolf Steiner. Eine Materialsammlung. Verein für Krebsforschung; Arlesheim 2020. 399 pp.

The Society for Cancer Research is recognised as a non-profit organisation in Switzerland. Donations can be deducted from taxes within the framework of the legal provisions.

Does Mistletoe Therapy Help Against Chronic Fatigue During Cancer?

FLORIAN PELZER M.SC.
SCR, DEPARTMENT FOR CLINICAL RESEARCH

«I feel so tired.» is a common statement among people who have cancer. Chronic fatigue is one of the most common symptoms associated with cancer. It can occur before diagnosis, during chemotherapy and for years afterwards. Until the end of the 1990s, chronic fatigue was mostly ignored by the oncological community and often hidden by the patients affected by it, mostly out of shame. In the last 20 years, however, the topic has received much more attention and finally been given a technical term: cancer-related fatigue.

Since then, therapies for cancer-related fatigue have been sought. Clinical research has now shown that physical activity as well as mindfulness exercises, such as yoga and eurythmy therapy, can reduce these symptoms of fatigue. What oncological societies have not taken enough into consideration is mistletoe therapy, although its positive effect on fatigue in cancer patients was already published in 1924: «*The attacks of weakness, previously perceived as severe conditions, give way to a subjective sensation of well-being*», as reported on January 11th, 1924 in the *Neue Wiener Zeitung* about *Cancerodoron*, the ancestor of all mistletoe preparations. From today's perspective, these past reports and their statements seem somewhat unserious when taken without evidence or proof. Public opinion, and even the law, now request comprehensive scientific methods in order to make statements on the effects of a drug.

One of these scientific methods is the meta-analysis. In a meta-analysis, all clinical studies that evaluate the effect of one drug on one symptom or disease are collected. All the measured effects of this drug are then summarized into a single number. This number therefore expresses the currently known average effect that the drug has on the symptom.

Now for a symptom like fatigue, which is a quite subjective sensation, one may ask how the effect of a therapy can be «measured» in numbers. To this question,

the *European Organisation for Research and Treatment of Cancer* (EORTC) first published an answer in 1993: cancer-related fatigue is quantified using questionnaires in which patients indicate how tired they feel on a scale, e.g. from 1 to 10.

In order to perform such a meta-analysis, the Society for Cancer Research, in cooperation with Witten/Herdecke University, the Gesellschaft für klinische Forschung e.V. and the Change Health Science Institute (both in Berlin), used specialized databases to identify all clinical studies in which the effect of mistletoe therapy on cancer-related fatigue has been measured. This project was carried out according to international scientific standards, as described e.g. in the Cochrane Handbook. Studies were included in the meta-analysis based on precise, predefined criteria: from the 1,165 references identified initially, 20 studies were included.

The statistical evaluation of the randomized clinical trials, which are considered to be of higher quality, showed that mistletoe therapy had a combined effect size of -0.48. This means that in average, mistletoe therapy can alleviate symptoms of cancer-related fatigue to a similar extent as physical exercise and yoga. It is thus another option for people with cancer-related fatigue symptoms. Mistletoe therapy could be particularly interesting for patients who are unable to undergo physical therapies due to their health status.

The meta-analysis also shows how many clinical questions are still open or have been insufficiently investigated. It is thus an interim evaluation of the current clinical evidence which allows for a targeted planning of our future research. What is lacking above all are placebo-controlled studies, which are important for an acceptance of mistletoe therapy among oncologists. To meet this important and challenging task, the Society for Cancer Research relies on its decades of expertise in clinical research and its network, i.e. on promising cooperations with universities, professional associations and research institutes. ■

The results presented above will soon be available under the title «Cancer-related fatigue in patients treated with mistletoe extracts: A systematic review and meta-analysis» on https://europepmc.org/.

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The Useful Beauty of Dried Body Fluid Patterns

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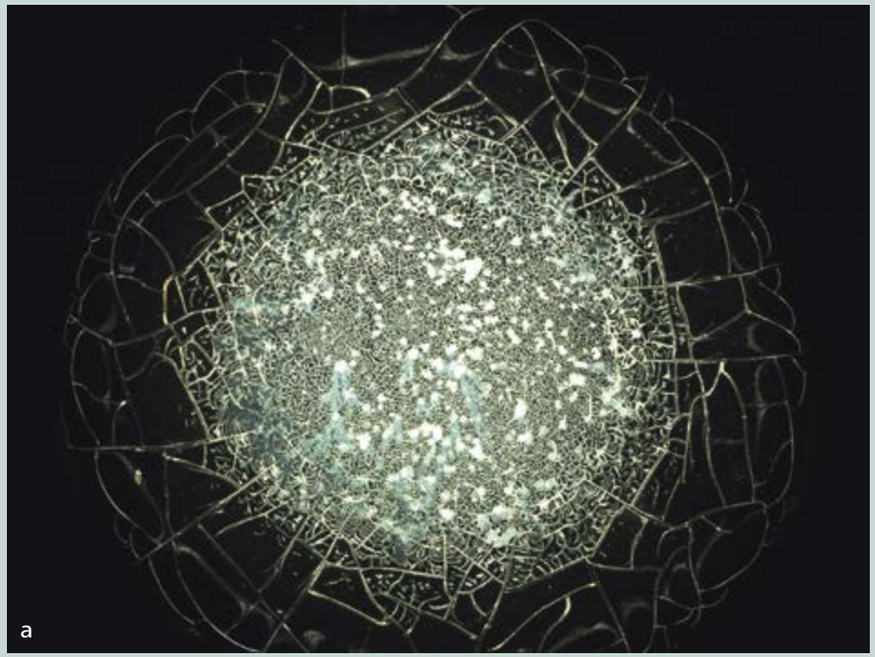
Almost everywhere in the world around us, the self-organisation of matter shows itself in regular and orderly forms: Ice flowers appear on window panes in winter, clouds paint repetitive patterns in the sky, and – if you look into far distances – you see the geometric order of our solar system and of distant galaxies. These are all examples of this mysterious phenomenon, which is not yet fully understood scientifically. In an incessant process, beginning with the Big Bang, matter has organised itself and, over time, has formed ever more complex units, systems and finally living organisms. The human body too, is such a self-organised organism – probably one of the most beautiful and unbelievable organisms on earth. It speaks the same ancient language of self-organisation: Any liquid contained in this organism forms regular and often astonishingly beautiful patterns when it dries out (chemical exsiccation). For a long time, scientists have been trying to understand the language of these patterns and to explore what these forms want to tell us about the state of the body, about health and about disease.

It is already known, for instance, that patterns formed in dried saliva can be used to identify fertile days in women. Similarly, the structures that appear in dried tears reveal the quality of the tear film and are thus suitable for diagnosing many eye diseases, while structures of dried sweat are used to diagnose cystic fibrosis. In addition to these already recognised diagnostic tests, there are many others that are still at the stage of purely experimental approaches; these mainly include tests with blood, serum and plasma (Fig. 1). Their potential is based primarily on the fact that blood and blood derivatives contain a variety of information about the entire body. It is suggested that the patterns formed by evaporation of



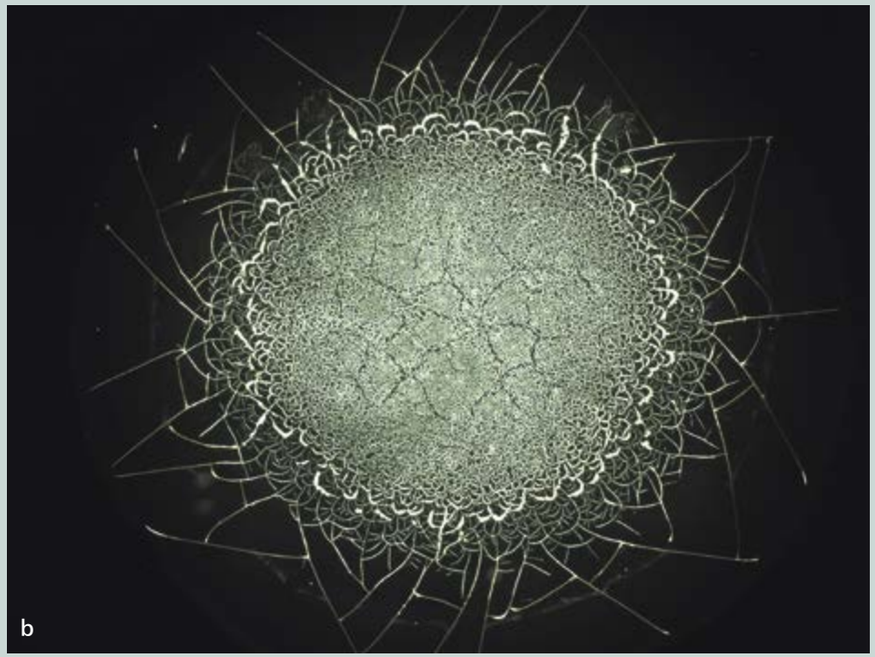


Figure 1: Examples of patterns obtained from dried EDTA plasma samples from two different donors. Sample (a) shows more concentric cracks and a dense inner structure, whereas sample (b) shows radial cracks and a defined inner structure.

these fluids could be helpful in diagnosing many systemic diseases such as: diabetes mellitus, inflammation, or cancer [1].

Nowadays, diagnostic tests based on the patterning of dried body fluids can count on the advantages of modern laboratory equipment. These allow precise control of evaporation conditions and support sophisticated patterning methods. This could significantly improve the repeatability of test results. Moreover, modern approaches to digital pattern evaluation such as deep learning can help translate the language of patterns for scientists and extract useful information that could increase the sensitivity and specificity of tests [2].

At the Society for Cancer Research, which already has a long tradition of researching picture forming methods, we have now conducted a detailed literature survey of all diagnostic tests available worldwide that deal with the evaluation of pattern formation of desiccating fluids [1]. The broad literature search considered 1'569 positions written in various languages and published between 1939 and 2020, of which 141 were finally included in the review. As a result, a total of six methodological protocols (Fig. 2) could be elicited, which were applied to a total of 20 different body fluids and examined for their potential to diagnose a large number of diseases.

Diagnostic tests for cancer diagnosis

We are now preparating a systematic review and a meta-analysis focusing exclusively on diagnostic tests for cancer diagnosis. In parallel, we are starting the experimental work, to investigate the influence of temperature and relative humidity on the patterns that form in drying serum and plasma droplets.

In the next step, experimental studies on diagnostic applications will be performed. In particular, we plan to analyse serum droplets from i) cancer patients, ii) patients with inflammatory diseases and iii) healthy donors and evaluate them using *deep learning* [6] algorithms. After that, as part of another

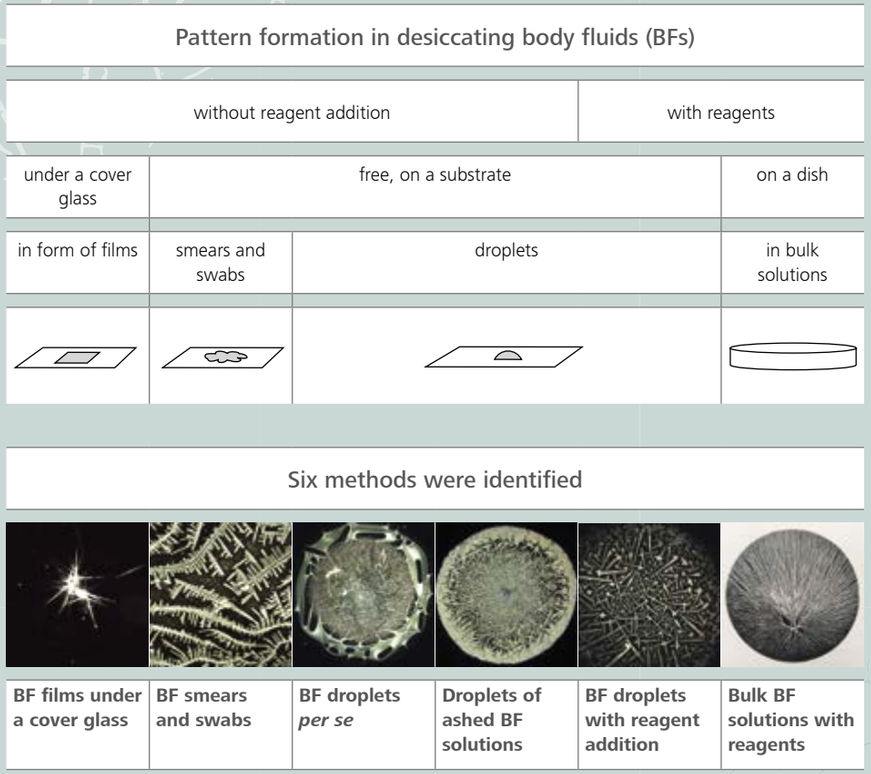


Figure 2: Classification of methods used in diagnostics for drying body fluids according to the addition of reagents, spatial restrictions and the type of deposition of the solution to be dried. Images by Maria Olga Kokornaczyk or re-used with permission from the authors (see references 3-5).

project, we want to examine selected samples from the relatively quick and easy drop evaporation method a second time using the more time-consuming copper chloride biocrystallisation method [7], which should give us an even more detailed insight into the state of the body.

We are convinced that the potential that picture forming methods have for the diagnosis of diseases is far from exhausted. Systematic research that combines scientifically recognised methods with modern laboratory equipment and intelligent software for pattern evaluation could help picture forming methods achieve a breakthrough. The timely recognition and interpretation of abnormalities helps to positively influence the course of the healing process. ■

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References and comments

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5. Shatokhina SN, Shabalin VN. Markers of malignant growth in the morphological pattern of human biological liquid. Voprosy Oncologii. 2010;56:293-300.
6. Deep learning is a sub-area of machine learning and uses neural networks and large amounts of data. The learning methods are based on the functioning of the human brain and result in the ability to make one's own predictions or decisions. Source: translated from bigdata-insider.de
7 See Paul Doesburg: «The copper chloride ($CuCl_2$) crystallisation method visualises the vitality of organisms», p. 18 ff.

The Copper Chloride ($CuCl_2$) Crystallisation Method Visualises the Vitality of Organisms

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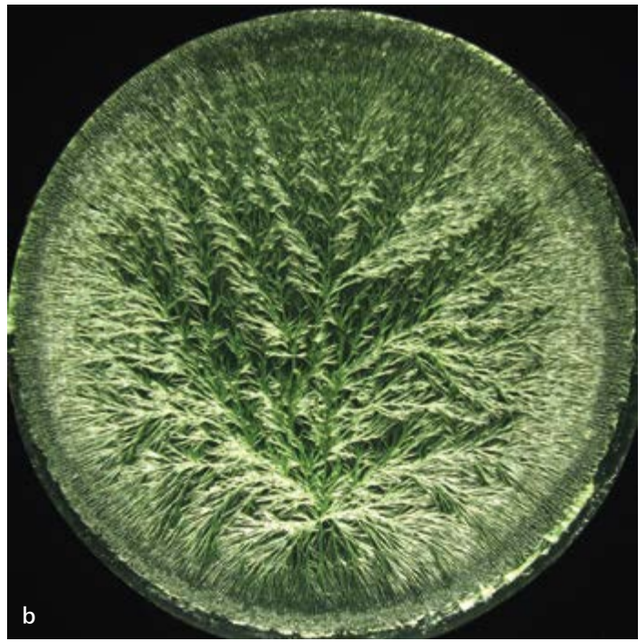
Nowadays food is increasingly being divided into «good» and «bad», with the focus being more on the substances, rather than on the actual products we eat. Food is considered to be of good quality when it contains few potentially harmful constituents – «the bads» – and higher levels of health supporting constituents – «the goods». This cause-and-effect approach has provided us with a wealth of information concerning the structure and functioning of the inorganic world, but it remains inadequate to understand aspects such as shape, self-regulation and resilience: characteristics of «the whole plant» or «the whole animal» which make up our food. Following this line of thought, a whole food product should not be reduced to a set of chemicals, but should be seen as a dynamic, hierarchically organised unit.

The copper chloride crystallisation method makes it possible to acquire a «fingerprint» of the «coherent whole» of an organism. This method is based on the phenomenon that tree-like crystallisation images emerge when a copper chloride solution is crystallised together with an extract (e.g. of a plant or of blood). These images are specific to the product under investigation, but differ considerably depending on the organism's «health status», whether plant, animal or human. In this way, quality differences can literally be made visible with the method (see Fig. 1 p. 20).

The crystallisation method has been applied to a wide range of samples, addressing various research questions, such as: the impact of different farming methods on food quality (see Fig. 2), the effect of ho-

The copper chloride crystallisation method was developed in the 1930s by Ehrenfried Pfeiffer (1899-1961), a researcher and soil scientist with strong links to biodynamic agriculture. In 1939, Pfeiffer received an honorary doctorate from Hahnemann Medical College in Philadelphia, USA, for the early detection of tumours by means of the crystallisation method. The crystallisation method is counted among the so-called «picture forming methods».



meopathic preparations, the diagnosis of clinical diseases in human blood, and most importantly the analysis of food quality.

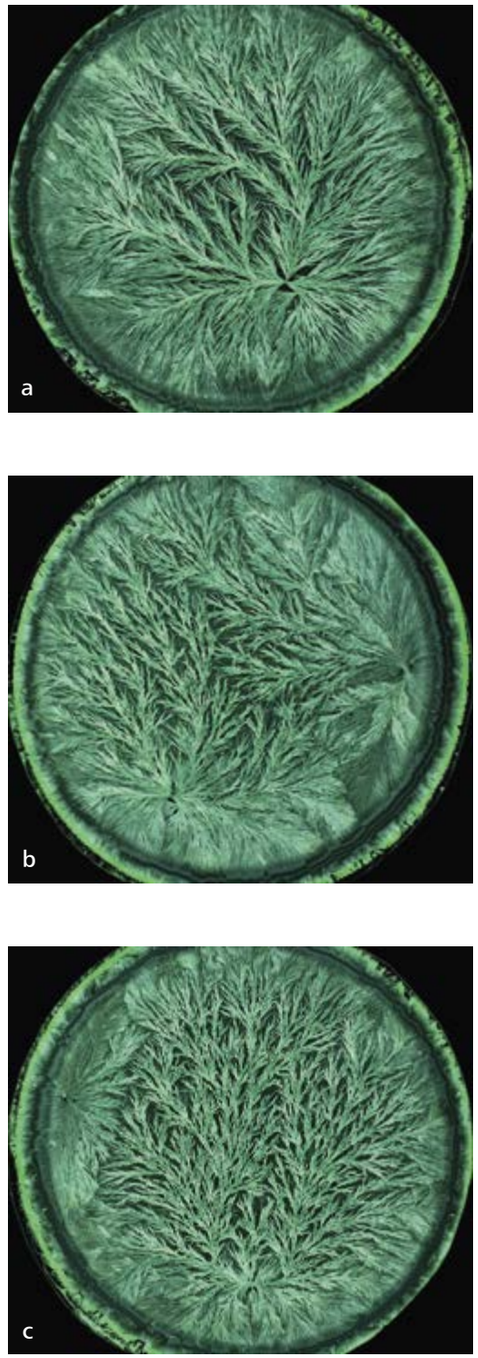
Computerised analysis allows for an indisputable, «objective» evaluation, which aids communication within the scientific arena. However, this approach misses nuances which are captured by a visual evaluation. To complement the computerised analysis, a visual evaluation with standardised criteria adapted from ISO norms for sensory panels has been developed [1].

The Society for Cancer Research (SCR) has been intensively involved with the copper chloride crystallisation method again for the last 10 years. In close cooperation with the European Consortium Triangle [2], which has developed state-of-the-art crystallisation chambers and brought the method into contemporary science over the last 20 years, the SCR has used them for quality research on mistletoe preparations and in basic homeopathic research. In 2020, Paul Doesburg, one of the consortium partners, joined the SCR and with him – a generous donation from the consortium – two crystallisation chambers. One of them is already fully installed and in operation. The SCR is thus becoming an important research site for the further development and application of the crystallisation method.

Currently, two PhD projects are underway investigating the effect of homeopathic preparations on germinating cress seeds using the crystallisation method. These projects focus on 1) the effect of heating and electromagnetic radiation of homeopathic preparations, and 2) the examination of specific effects of different homeopathic preparations on cress seedlings.

Fig. 1: Crystallisation pattern of carrots.
a: Freshly pressed carrot juice.
b: The same juice after 4 days of storage in the refrigerator.

In experiments like these, in which fresh and aged food samples are compared, one sees particularly impressively, how the crystallisation patterns react with a loss of integrity during ageing. It corresponds to the image that one would commonly associate with ageing. The differences in quality are literally made visible with the method.



On the top of our wish list for further research are the following two innovative projects: 1) research into the potential of the crystallisation method for diagnosing clinical pathologies and estimating predispositions to certain diseases (based on samples from the droplet evaporation method of the Clinical Research Department [3], which are determined by means of bulk screening), and 2) research into the influence of individual biodynamic cultivation techniques on the quality of medicinal plants.

There is a need for new research methods that can visualise aspects such as vitality, resilience and self-regulation; these aspects are not currently part of the remit of science. The aim of our work is to contribute to broadening this scope, based on the understanding that «life» is more than a collection of individual substances and not merely an ancillary element of chemical and physical processes, but rather comes to expression through them [4]. ■

Literature and comments

1 A sensory panel is a group of people trained to distinguish and evaluate all aspects related to taste, aroma and texture of food. Analogously, a panel for the visual assessment of crystallisation images was also established.

2 A cooperation between the University of Kassel (GE), the Louis Bolk Instituut-Crystal Lab (NL) and the BD research association (DK).

3 See Maria Olga Kokornaczyk: «The useful beauty of the patterns of dried body fluids», p. 12–17

4 More detailed information can be found in the article «Vitalität im Bild» by Paul Doesburg, in the book «Vom Acker auf den Teller», Jasmin Peschke et al, AT Verlag 2021

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Figure 2: Crystallisation patterns of wheat from different farming methods.
a: biodynamic. b: organic. c: conventional.
What is striking about conventional farming is the lack of a maturing phase. Basically, the refinement or «finish» that belongs to a harmoniously developed product is missing. Often, too much fertiliser is used, which leads to one-sided growth. Instead of a calm ripening, decomposition tendencies take over already in the growth phase. Photos: J. Fritz, University of Bonn, Germany

From Bench to Bedside: The Conditions for the Development of New Pharmaceutical Preparations

DR. JAKOB MAIER
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One focus of the Hiscia Research Institute is the development of new preparations for the treatment of cancer patients. For example, since 2018 we have been working on an «ointment for open cancerous tumours» (ulcerating tumours), based on a remedy statement by R. Steiner for which larch resin, beeswax, thyme and pennywort are processed – the so-called «Resina Laricis / Lysimachia comp.» cream [1]. Already in 2018 and 2019, in collaboration with the University of Basel, two master's theses in pharmacy were carried out for this purpose at the Society for Cancer Research: In the first master's thesis, Charlotte Richard showed that the substances listed above have the pharmacological potential to treat the typical symptoms [2] suffered by patients with ulcerating tumours. Kevin Rodriguez developed in the second master's thesis the formula for a cream with the highest possible content of active substances. Both master's theses were very helpful in speeding up the ongoing research and development of the new preparation.

In February 2020, the formulation of «Resina Laricis / Lysimachia comp.» was handed over to the pharmacy of the Klinik Arlesheim, which now produces this cream in small quantities as a magistral preparation [3]. Hereby, after a relatively short development time, patients can be provided with the new preparation via a doctor's prescription. As for every new preparation, the development of «Resina Laricis / Lysimachia comp.» is closely accompanied by a working group of doctors and researchers. First observations indicate that in this composition, the cream can contribute to the management of wounds.

The next step would be to apply for a marketing authorisation as an anthroposophic medicinal product for individual therapy [4] in Switzerland. For this purpose, the quality and safety of the formulation must be proven, but no proof of efficacy must yet be provided. For the large treasure trove of well-known medicinal plants that have been used in Homeopathy and Anthroposophic Medicine for a long time, Swissmedic provides a facilitated authorisation if the formulation can be classified as safe [5]. This applies to the starting materials for Resina Laricis / Lysimachia comp. so that no new toxicological studies or assessments need to be carried out here.

If in the future, one is also striving for a marketing authorisation as a medicinal product *with indication*, which, according to pharmaceutical advertising law in Switzerland, is a prerequisite for being able to communicate the intended use of the medicinal product to the general public, the efficacy must be sufficiently proven. Compared to the EU, the multi-level legal frameworks that are possible here in Switzerland offer better conditions for developing and bringing innovations to market in the field of complementary medicine.

Nevertheless, the variety of complementary and herbal medicines in Switzerland has been steadily decreasing for about 10 years, although the population clearly expressed its support for complementary medicine in the 2009 federal referendum. Measured in terms of the number of Swissmedic authorisations, herbal medicinal products experienced a particularly sharp decline of 40%. Homeopathic and anthroposophic preparations for individual therapy have also been in decline for some time. [6] The reasons for this are mainly economic: homeopathic and anthroposophic medicinal products for individual therapy can often no longer be produced and distributed in a way that covers costs. This cost problem is due to the relatively low reimbursement prices of the basic insurance and the simultaneously increasing production requirements, the so-called Good Manufacturing Practices (GMP), for medicinal products.

That is why it is important and valuable that the Hiscia Research Institute can continue to research and develop new preparations. The support of private institutions and donors contributes significantly to ensure that such innovations, which are of great concern to the population, remain possible. By networking with partners such as universities or other institutions (e.g. the Ita Wegman Campus), synergies are optimally used and knowledge and experience are shared in order to achieve faster progress together. ■

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Literature and comments

1 Krüger H, ed. (1969) Heilmittelangaben Rudolf Steiners, Kapitel Resina Laricis / Larix decidua. Medizinische Sektion der Freien Hochschule für Geisteswissenschaft am Goetheanum, Dornach

2 Main symptoms of exulcerating tumours and pharmacological potential of the composition are (according to literature): i) odour: disinfectant, antimicrobial, deodorant; ii) inflammation: anti-inflammatory; iii) pain: analgesic; iv) open wound: wound-healing; and v) bleeding: haemostatic.

3 Medicinal products prepared in a public pharmacy in execution of a medical prescription, ad hoc or in stock, do not need a marketing authorisation [Heilmittelgesetz (HMG) Art. 9 Abs. 2 Buchst. a]

4 A medicinal product without indication is used for individual therapy, i.e. the medicinal treatment of a patient with a complementary medicinal product, based on a comprehensive medical history according to a specific therapeutic principle [KPAV Art. 4 Abs. 1 Buchst. a]

5 Komplementär- und Phytoarzneimittelverordnung (KPAV). Swissmedic, 2018 (Status as of 1 July 2021)

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Research on Controlled Cultivation of the Apple Tree Mistletoe – Christoph's Heritage

DR. HARTMUT RAMM
SCR, BOTANICAL DEPARTMENT

It was a cool spring, as if the climate had remembered the springs of the past. We were therefore, in mid-April 2021, still able to sow mistletoes in Christoph Surbeck's apple trees. He had planted the orchard behind his home in 2011, after his retirement, to devote himself to the research questions that had arisen in him over several decades as a biodynamic farmer and fruit grower.

Shortly after his retirement, Christoph was diagnosed with a brain tumour. After surgery and chemotherapy, the outpatient support at Klinik Arlesheim with *Helleborus* and *Cetraria* preparations did him good.

An inpatient stay followed in October 2017, during which mistletoe extracts were added to the therapy. When he read in the VfK annual report that the supply of apple tree mistletoe was threatened by a new type of leaf disease, he decided to integrate the cultivation of mistletoe into his fruit-growing project.

During the treatment, we met at the clinic and discussed how the Botanical Department of the Hiscia Institute could support his project. We met again in Thurgau some weeks later, shortly before Christmas 2017. The stay at the clinic had tired him out, but Christoph did not miss the opportunity to take us on a tour of his orchard and even to plant the first mistletoe seeds on a few apple trees.

Later, we talked about an article in the *Thurgauer Bauer* that discussed the strong spread of mistletoe on orchard trees in the close-by area of Kemmental. We discussed possible social and ecological consequences that Christoph's project could have for this fruit-growing area. The concerns and worries of the fruit growers and of the population were to be taken seriously, but with guided tours and well-founded information on the mistletoe's way of life, we believed we might encourage more understanding for the coexistence of commercial fruit growing and mistletoe cultivation.

Christoph Surbeck tying young branches on his apple trees

One month later, the life of Christoph came to an end. At the funeral service in the packed church of Weinfelden, Carola Gerhard, pastor of the Christian Community in Konstanz, also spoke about the mistletoe. Quite a few people decided to support Christoph's project and thus promote research into the controlled cultivation of apple tree mistletoe.

Since then, Christoph's intentions have lived on in a small group of people. For Lis Surbeck it was initially a great challenge, but it increasingly becomes a joy for her to continue her husband's projects. Jakob Rohrer, a good friend and advisor at the Thurgau Education and Advisory Centre Arenenberg, provides biodynamic expertise and support. Together with his partner, Barbara Dietz, he takes care of the orchard, from pruning the trees and cutting the undergrowth to harvesting and marketing the fruit.

In March of 2018, two months after the funeral service, Lis and I sowed more mistletoes together. We limited ourselves to selected trees in a few rows and stuck two mistletoe seeds on each of three branches – within reach, so that we would be able to harvest the mistletoe later without a ladder.

The project is now in its fourth year. Christoph had himself sown several of the young mistletoe plants shortly before his death. He is now with us as we examine tree after tree and note down each growing mistletoe. In the end, we came up with 86 small mistletoes. Some of them have already blossomed. When we can determine the ratio of male and female plants among them in two years' time, we will already be able to «harvest» a first valuable research result.

The large pollen of the male mistletoe is a welcome nourishment for Christoph's bees, which Lis now continues to look after. The white berries of the female bushes, on the other hand, are an important component for the production of the mistletoe remedy used in oncology. Also, ripe mistletoe berries are the main winter food for the mistle thrush, the fieldfare and the blackcap – the best-known mistletoe spreaders in our latitudes. To prevent uncontrolled spreading, we will already pick all mistletoe berries at the beginning of November and process them pharmaceutically.

This «apple-bee-mistletoe» project is not only the realization of Christoph´s heartfelt concern. Rather, it can also inspire us to rethink our relationship with mistletoe and to reshape the way we deal with this special medicinal plant. ■

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Handwritten Notes From Steiner Open up New Points of View

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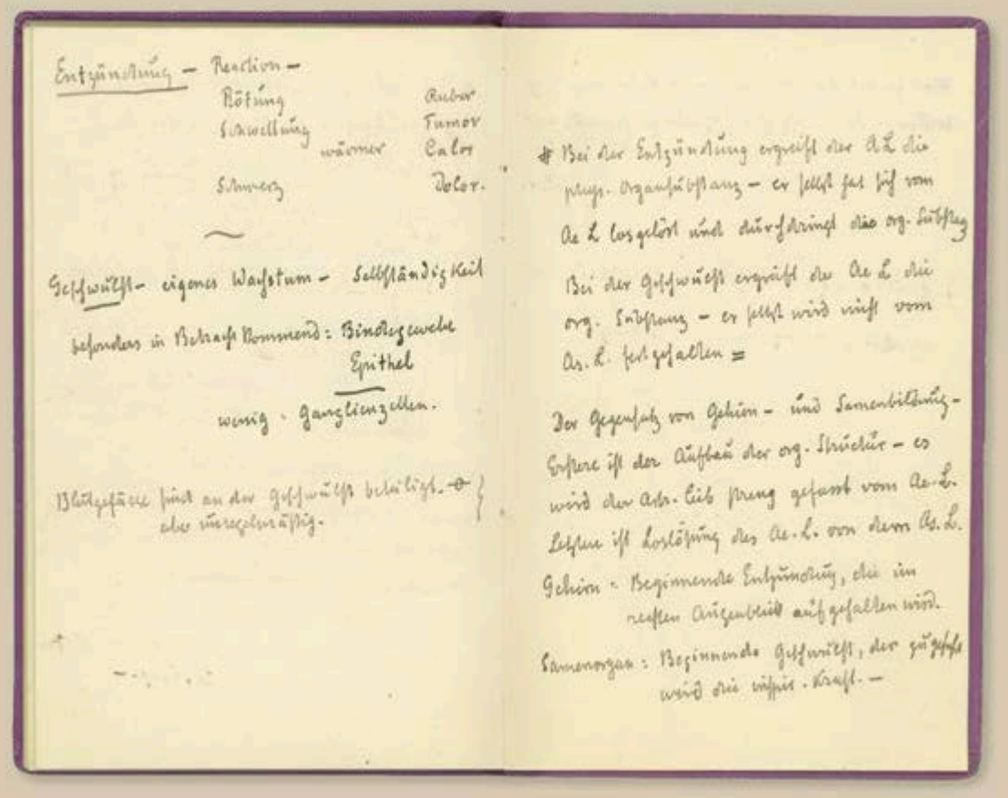
A treasure rests in the depths of the Rudolf Steiner Archive in Dornach: 622 notebooks and 7'450 notes with Steiner's handwriting. In the course of his life, Rudolf Steiner recorded a variety of things: Notes for the preparation of his lectures, spiritual scientific research results, accountings, addresses and text fragments. Daily routine and profound esoteric knowledge stand here side by side. Large parts of this treasure have not yet been tapped. [1] However, Alexander Leroi (1906 – 1968), medical doctor, member of the board of the Society for Cancer Research (SCR) from 1948 to 1968, founder and long-time director of the Hiscia Research Institute, knew about the value of these notes and notebooks. As a researcher committed to finding the spiritual explanation for cancer and the use of mistletoe as a remedy, it was clear to him that essential additions to Steiner's lectures would be found there. With his diligence, he collected all the documents he could find, sometimes copying notes by hand. The extent to which Leroi not only consulted all published sources but also looked through the unpublished originals in the Rudolf Steiner Archive cannot be reconstructed. Through this work, a comprehensive collection of documents was created, now archived at the SCR. The publication of the material was not realized during Leroi's lifetime, and became largely forgotten.

During the research for the book *Mistletoe and Cancer in the Works of Rudolf Steiner* [2], Leroi's bundles of documents fell into our hands more or less by chance. Until then, we had considered reproducing individual notes by Steiner that were known to us, without claiming to be complete. However, when we looked through the discovered documents, we were amazed – with practical consequences. Unexpected perspectives opened up, which sometimes shed a whole new light on the topic of mistletoe and cancer. The closer we investigated the details of this discovery, the more exciting it became. It turned out, for example, that Steiner had outlined a «double-entry bookkeeping» on the subjects of inflammation and cancer. On four double-pages, he recorded side by side spiritual and natural scientific aspects of these polar disease patterns (see Fig. 1). This fact does not emerge from the transcription published in 1966 [3], which only reproduces parts of the original. It is only when we look at the complete manu-



Legend for Figure 1: First page of Rudolf Steiner's «double-entry bookkeeping» on inflammation and cancer, notebook 43. Reproduced with kind permission of the Rudolf Steiner Archives, Dornach, where the original notebook is located.

script that it becomes clear that Steiner himself practiced the method, which he later recommended to a group of medical students [4].

In view of such discoveries, it soon became clear: The book *Mistletoe and Cancer in the Works of Rudolf Steiner* had to be extended by a chapter to give space to these findings. The notes not only deepen familiar content (as, for example, in the case of the transcripts of the twenty lectures *on the Humanities Specialist Course for Doctors and Medical Students, GA 312/ NB 71)*, but in some cases open up entirely new points of view that do not appear anywhere else in the complete work.

We therefore decided to include in the volume all the notebook entries on mistletoe and cancer that we could discover. They are reproduced in facsimile [5] to give as authentic an insight as possible into Steiner's research method, and are accompanied by transcriptions. Together with the lecture transcripts and the corresponding blackboard drawings, the three types of sources now form a triad.

With the publication of the book *Mistletoe and Cancer in the Works of Rudolf Steiner* in the summer of 2020, we were finally able to make the preliminary work performed decades ago by Alexander Leroi accessible to the public. We are looking forward to seeing what other findings will be made in the next few years as we begin to tap into the SCR archives. Initial sightings indicate that the one or other treasures are still hidden here. These treasures could be significant not only for the history of the SCR, but also to improve our understanding of the history and the development of Anthroposophic Medicine. ■

Literature and comments

1 GA volume no. 46, published in 2020, provides detailed insights into the cosmos of Steiner's notes for the first time as part of the Complete Edition. In earlier years, individual excerpts from the notebooks were published in the Beiträge zur Gesamtausgabe.

2 Neisecke J, Ramm H, Hrsg., Mistel und Krebs im Werk von Rudolf Steiner (Arlesheim: Society for Cancer Research, 2020).

3 Groddeck W, Hrsg., Beiträge zur Rudolf Steiner Gesamtausgabe Nr. 16 (Dornach: Rudolf Steiner Nachlassverwaltung, 1966), S. 18.

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5 Facsimile: true copy or (photographic) reproduction of an original.

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