APPLIED CLINICAL RESEARCH FOR THE SKIN

SIT SKIN INVESTIGATION AND TECHNOLOGY HAMBURG GMBH IS NOW PART OF SGS, THE WORLD’S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.
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The company was founded as an independent private dermatological contract research organisation (CRO) by Dr Joachim Degwert and Prof. Dr Volker Steinkraus in 1997. Since March 2018 SGS SIT is part of SGS, the world’s leading inspection, verification, testing and certification company. SGS SIT is specialised in performing dermatological, cosmetic and clinical studies and research for the cosmetic, chemical, pharmaceutical and food industries.

Besides dermatological in vivo and the combination of in vivo, ex vivo and in vitro studies on human subjects, SGS SIT also offers a wide range of innovative in vitro biological tests as well as alternative methods. SGS SIT is dedicated to providing its clients with a flexible and prompt implementation of their study design, a quick study execution in line with European and international legislation and guidelines, and study results of high quality.

Our ideal location in the centre of Hamburg allows us an easy and quick recruitment of volunteer subjects. SGS SIT cooperates with the DERMATOLOGIKUM Hamburg, a well-known private dermatological clinic founded by Prof. Dr Volker Steinkraus (www.dermatologikum.de). The DERMATOLOGIKUM supports SGS SIT with its dermatological know-how and a network of specialists in medical and natural science.

STANDARD TEST TERRITORIES AND PRODUCT FIELDS

COSMETOLOGY
- Dermatology
- Ophthalmology
- Photobiology
- Clinical research
- In vitro cellular biology

PRODUCT FIELDS
- Cosmetic products
- Active ingredients
- Raw materials
- Hair care products
- Toiletries
- Food supplements
- Medical/cosmetic devices
- Textiles
Advice on the best study design for individual claim support

Performance of standard trials and development of sponsor-specific study designs

Full services in dermatological research (phase I-III) including definition of the study protocol and the approval by an Ethics Committee

Monocentre or multicentre studies

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**GENERAL SERVICES**

- Advice on the best study design for individual claim support
- Performance of standard trials and development of sponsor-specific study designs
- Full services in dermatological research (phase I-III) including definition of the study protocol and the approval by an Ethics Committee
- Monocentre or multicentre studies

**YOUR BENEFITS**

- Recruitment of specific subjects out of a pool of more than 8,000 volunteers
- Highly specialised analytical and biophysical equipment
- Efficient and fast study execution
- Computerised network-associated data handling and direct automated data transfer

- Data processing, graphical presentations and statistical analyses (STATISTICA®)
- Detailed scientific study reports and publications
- Literature research
- Dermatological research
SKIN TOLERANCE TESTS

GENERAL ASPECTS

- Standard trials or development of sponsor-specific study designs to meet your needs
- Tests on subjects with special skin features (e.g. sensitive skin, atopic skin, etc.) if requested
- Tests on scarified or tape-stripped skin if requested
- Supervision by dermatologists, ophthalmologists or paediatricians if requested

- Visual assessments by trained experts
- Regularly performed training of experts by means of colour vision tests (Farnsworth-Munsell 100-hue test)

PATCH TESTS

- Epicutaneous patch test
- Repetitive epicutaneous patch test
- Repeated insult patch test

FURTHER SKIN TOLERANCE TESTS

- Home in-use test/observed use test (dermatologist/ophthalmologist)
- Repeated Open Application Test (ROAT)
- Barrier integrity (TEWL)
- Arm flex wash test
- Forearm wash test
- Acute irritation test
- Stinging effects
- Rasure/depilation/epilation studies
- Phototoxicity test/photosensitisation test
/ PROOF OF EFFICACY

STANDARD BIOPHYSICS

- Skin moisture (Corneometer®, Skicon®, DermaLab®)
- Skin roughness (silicon imprints, Primos® in vivo)
- Skin scaliness (D-Squames®, analysis with SquameScan® or by an expert grading)
- Skin elasticity (Cutometer®, Torquemeter®, Ballistometer®)
- Eye wrinkles and fine lines (Primos-RC® by Canfield)
- Structure of the dermis (Ultrasound DermaScan® C)
- Skin whitening/effects on melanogenesis (Siascope®, Mexameter®, Spectrophotometer®)
- Anti-inflammatory effects (UV erythema model, SDS model)

EVAPORATIVE WATER LOSS (DermaLab®, Aquaflux®)

- Skin barrier integrity (trans-epidermal water loss, TEWL)
- Trans-onycheal water loss on fingernails (TOWL)
- Water-holding capacity: Plastic Occlusion Stress Test (POST), Skin Surface Water Loss (SSWL)
- Skin resilience (following tape stripping)

PHOTODOCUMENTATION

- FotoFinder® System, VISIA CR®

IMPURE FACIAL SKIN

- Sebum production (Sebumeter®, Sebupatch®)
- Skin surface shine, complexion (Glossymeter®)
- Acne reduction: Lesion count, lesion size and redness (visual assessment, colorimetry/Spectrophotometer®, Mexameter®, FotoFinder® System, VISIA CR®)
- Deep-pore cleansing effect of cosmetic products and/or devices (high-resolution photography and expert assessment)

SCALP, HAIR AND NAILS

- Skin moisture at the scalp (DermaLab®)
- Hair growth (trichogram, length and thickness)
- Keratolytic properties (anti-dandruff)
- Nail growth and quality (brittleness, histology, leukonychia, etc.)
- Transonycheal water loss on fingernails (TOWL, DermaLab®)
- Photo documentation

ADDITIONAL SPECIAL PARAMETERS

- Lipid barrier by stripping with Lipbarvis® in cooperation with Microscopy Services Dahnhardt GmbH
- Microbiom analysis in cooperation with Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB
- Subjective evaluation of product performance
- Anti-inflammatory effects (UV erythema model)

DERMATOLOGICAL MODE OF ACTION (IN VIVO ➤ EX VIVO ➤ IN VITRO)

- Non-invasive via suction blister biopsies (e.g. collagen, interleukins, oxidative stress, cell proliferation, stem cell activity, histology, etc.)
- Invasive via punch biopsies (e.g. histology, molecular biology, etc.)

- Axillary studies (shaving, visual assessment)
- Peeling (exfoliating) effect
- Shaving/depilation/epilation procedures
- Cleansing efficacy of cosmetics/cosmetic devices
- Nappy studies (newborns and babies)
- Oral food supplement studies (e.g. cellulite by ultrasound measurements and Primos® in vivo)
- Rinse-off studies (short and long-term kinetics)
- Leave-on studies with kinetics and regression phases
- Regenerative effect/cell renewal (DHA method)
- Natural moisturising factor (e.g. urea analytics)
- Biochemical/molecular biological analysis
- Deodorant effects (sniff test)
- Anti-pollution study (cigarette smoke model using the suction blister method)
/ CLINICAL STUDIES

DERMATOLOGY
- On subjects with skin, hair or nail problems such as: atopic skin, impure skin, acne vulgaris, psoriasis, inflammatory dermatoses, nail dermatoses, diabetics, infants/babies, etc.
- Visual expert grading at hands and feet (chapped hands, cracked heels) and fingernails (leukonychia, brittleness)

Wound healing (e.g. medical devices)
Anti-inflammatory effects (UV erythema model, SDS model)
Integrity of the skin immune system (UV-induced immunosuppression)
Vasoconstriction test/blanching (glucocorticoids)

OPHTHALMOLOGY
- In-use applications (tolerance and efficacy assessment, slit lamp examination)

PAEDIATRICS
- In-use applications (visual tolerance and efficacy assessments)

/ PHOTOBIOLOGY

SUN PROTECTION FACTORS
- In vivo sun protection factor (SPF) determination according to Cosmetics Europe (formerly COLIPA) or ISO guidelines (ISO 24444:2010)
- Water resistant properties (whirlpool, water curtain)
- UVA protection factors:
  - in vivo: according to ISO 24442:2011
  - in vitro: Boots Star Rating System or ISO 24443:2012

SUN PROTECTION AT THE CELLULAR LEVEL
- Photoageing (elastic fibre and collagen destruction in vivo)
- UV-induced immunosuppression (Langerhans cells and functionality of the skin immune system)
- UV-induced immunomodulation (expression of inflammatory and immunoregulatory cytokines, in vivo and in vitro)
- Sunburn cell formation (in vivo and in vitro)

- Immunohistological analyses of UV-induced DNA damage in vivo and in vitro (thymine dimers, 8-oxoguanine)
- Expression of metallo-proteinases (MMPs)
- Oxidative stress (lipid peroxidation and protein oxidation)
- Pigmentation and whitening (effect on melanogenesis)
IN VITRO TESTING

CELLULAR AND MOLECULAR ANALYSES WITH HUMAN SKIN CELL CULTURES, ORGANOTYPIC SKIN MODELS AND IN VIVO ➤ EX VIVO ➤ IN VITRO SAMPLES (SKIN BIOPSIES AND SUCTION BLISTER BIOPSIES)

- Cytotoxicity testing (NR-test, MTT-test, WST1-test)
- Phototoxicity testing (NR-test, MTT-test, WST1-test)
- Cellular toxicity and apoptosis
- Cell proliferation and differentiation
- Cell metabolism (e.g. ATP content)
- Irritation testing (e.g. on reconstructed human epidermis)
- Differential gene expression via Real Time PCR
- ELISA tests (e.g. collagen, fibrillin, hyaluronic acid, 8-isoprostane, carbonyl proteins, metalloproteinases, cytokines)
- Protein synthesis
- Antioxidant testing
- Immunohistological analyses of UV-induced DNA-damage in vitro (thymine dimers, 8-oxo-guanine)
- Histological and immunohistological analyses
- Pigmentation and whitening (effect on melanogenesis)
- Anti-inflammatory effects (e.g. secretion of inflammatory cytokines)
- Sun protection

DERMATOLOGICAL RESEARCH

- Cooperation with universities and dermatological clinics
- Activities in different scientific dermatological societies
- Participation in international evaluation and validation studies
- Research on a product’s mechanism of action
- Establishment of innovative study designs
SGS SIT’s continuing success stems from its qualified and highly motivated employees. Over the years, we have filled the key positions with a broad range of highly qualified experts:

- Dermatologist
- Biologist
- Biochemist
- Immunologist
- Dermatohistologist
- Instrument Engineer
- Biostatistician
- Technician
- Cosmetician
- Cosmetic Scientist

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**STAFF – THE MULTIDISCIPLINARY TEAM OF SGS SIT GMBH**

**GENERAL ASPECTS ON ETHICS AND QUALITY MANAGEMENT**

- Certified quality management according to DIN EN ISO 9001
- Compliance with European and international legislation and guidelines (GCP, GLP)
- Recruitment and handling of subjects according to the current revision of the Declaration of Helsinki
- Computerised panelist database with every subject being dermatologically characterised
- Study performance in agreement with standard operation procedures (SOP)
- Study audit by Quality Assurance Unit
- Regular staff training
- Indoor and outdoor climate data under continuous supervision
ROOMS AND EQUIPMENT

With about 1,000 square metre, you will find our spacious facilities optimised for the performance of dermatological studies and clinical trials.

Our eight laboratories and comfortable waiting rooms are climate rooms under continuous temperature and humidity control, which ensures testing under standardised conditions and provides reliable test results. In addition, you will find functional laboratories for special in vivo studies and for in vitro tolerance, toxicity and efficacy tests.

Diverse state-of-the-art bioengineering and cell culture instruments and equipment provide the platform for an efficient and objective data evaluation for your safety assessment and your product claim substantiation.

CONTACT

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