APOTHEKE
AM
HAUPTBAHNHOF
INTERNATIONAL PHARMACY
DR. FRANK STEPKE

Dyckerhoff Pharma GmbH & Co. KG
Robert-Perthel-Str. 49
D-50739 Köln

DYCKERHOFF
·PHARMA·

Information about REGENERESEN®

according to Prof. Dr. H.Dyckerhoff

Biological active ribonucleic acids (RNA)
for treatment of
chronic and degenerative diseases

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Address

Dyckerhoff Pharma GmbH & Co. KG
Robert-Perthel-Straße 49
D-50739 Köln

Telephone 0049/221/957437-0
Fax 0049/221/957437-45

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Preface

This brochure is meant as a small manual for therapy with

REGENERESEN® after Professor Dr. H. Dyckerhoff,

including the special REGENERESEN® RN 13, AU 4 and OSTEOCHONDRIN® S.

Already with 40 years of age can the first complaints due to degenerative diseases become noticeable. The exact diagnosis and an early beginning of treatment are prerequisites for a successful therapy. Triggers for many wear and aging processes is the loss of the body's own ribonucleic acids. Thus the tissue loses its regeneration ability. Chronic and degenerative diseases with disturbed cellular metabolism can be treated with ribonucleic acids directly. Numerous scientific studies are concerned with the favorable influence of the ribonucleic acids on the protein biosynthesis and on further important metabolic processes within the area of the immune system, the hormonal system, as well as with the development of the body's own nucleic acids.

REGENERESEN® after Professor Dr. H. Dyckerhoff, contains organ-specific ribonucleic acids from cattle and ribonucleic acids from yeast as active ingredients. In treatment with REGENERESEN® both the diseased organ and the control organ of the endocrine feedback system are included in the specified treatment plan. More than 40 different types of REGENERESEN® from different organs form the basis for this therapeutic concept. The application of the REGENERESEN® is frequently useful where preceding working methods have failed. This is because the concerned organs or organ systems are reduced in their regeneration ability or are degenerated. By the application of organ-specific RNA, the regeneration system in the cells succeeds to (re)activate or to normalize. The REGENERESEN® can be combined without problem in the sense of integrated therapy with other treatment forms.

Pharmacological and toxicological checks as well as the clinical experiences for many decades acknowledged the effectiveness and the safety of REGENERESEN®. Neither acute nor chronic toxicity is ascertainable. This proven security of the REGENERESEN® enables also the continuous treatment when necessary for individual diseases. Thus REGENERESEN® is a valuable tool in the treatment of chronic and degenerative diseases.

Köln, Dezember 2000

Cooperative work from : *A. Korth, G. Stommel and S. Schühlein*

General information about REGENERESEN®

after Professor Dr. H. Dyckerhoff
including the special REGENERESEN® AU4, RN 13 and OSTEOCHONDRIN® S.

REGENERESEN®

Composition
1 ampoule of 5 ml contains:

– pharmaceutically active ingredients
Ribonucleic acids-sodium from cattle and ribonucleic acids-sodium from yeast 6.3 mg. The respective specifications to the origin are on the ampoule and on the packaging. Altogether more than 40 different types are available.

– other ingredients
water for injection purposes, alanine, phenylalanine

Indications
To support treatment of chronic and degenerative diseases, with which protein synthesis and – as far as they are connected - hormonal functions are disturbed.

AU 4 REGENERESEN®

Composition
1 ampoule of 5 ml contains:

– pharmaceutically active ingredients
Ribonucleic acids-sodium from auditory pathway, auditory nerve, auditory centre, internal ear (species cattle) and ribonucleic acids-sodium from yeast 6.3 mg

– other ingredients
water for injection purposes, alanine, phenylalanine

Indications
To support treatment of presbyacusis, degenerative internal ear diseases, sudden deafness, medicamental and toxic internal ear damages.

RN 13 REGENERESEN®

Composition
1 ampoule of 5 ml contains:

– pharmaceutically active ingredients

Ribonucleic acids-sodium from vessel wall, cerebral cortex, heart, pituitary, hypothalamus, liver, spleen, adrenal cortex, kidney, ovary, placenta, testes, thalamus (species cattle) and ribonucleic acids-sodium from yeast 6.3 mg

– other ingredients
water for injection purposes, alanine, phenylalanine

Indications
To support treatment of geriatric complaints, age caused endocrine involution, general manifestations of aging, to increase resistance (increase of the immune defense), for the conservation of strength.

OSTEOCHONDRIN® S

Composition
1 ampoule of 5 ml contains:

– pharmaceutically active ingredients
Ribonucleic acids-sodium from intervertebral disc, cartilage, synovia, placenta (species cattle) and ribonucleic acids-sodium from yeast 6.3 mg

– other ingredients
water for injection purposes, alanine, phenylalanine

Indications
To support treatment of osteochondrosis, osteoporosis, osteoarthritis, spondylosis, brachialgia

For all REGENERESEN® together valid specification:

All single REGENERESEN®, AU 4 REGENERESEN®, RN 13 REGENERESEN® and OSTEOCHONDRIN® S can be used, if necessary in combination. Mixtures with other preparations are to be avoided for safety reasons in any case.

Contraindications
Manifest gout, phenylketonuria and other reduction defects of phenylalanine.
In pregnancy and breastfeeding the medicament is to be applied only very restrictively.

Side effects
Hypersensitivity reactions can occur in very rare cases i.e. pruritus or erythema. With the occurrence of such reactions the therapy should be terminated.

Interactions with other substances
Tetracycline, chloramphenicol, aminoglycoside antibiotics and other antibiotics, whose active mechanisms are based on an inhibition of protein biosynthesis, can weaken the effect of REGENERESEN®, AU 4 REGENERESEN®, RN 13 REGENERESEN® and OSTEOCHONDRIN® S.

Precautions for application
In tests on animals there were no embryo-toxic / teratogene effects. Nevertheless the principle should be considered that medicaments in pregnancy are to be applied generally only very restrictively. It is not known whether ribonucleic acids can be carried into the mother's milk.

Longevity
REGENERESEN® should not be injected after the date of expiration.

Special storage and stocking information
none

Packaging

	OP with 1 ampoule	OP with 5 ampoules	OP with 10 ampoules
REGENERESEN®	•	(•) see directory	
AU 4 REGENERESEN®	•	•	
RN 13 REGENERESEN®		•	•
OSTEOCHONDRIN® S		•	•

REGENERESEN® are obtained from a Pharmacy.

REGENERESEN® ampoules are sterilized with 134°C over 18 minutes in the strained water vapour.

Pharmacokinetics

Ribonucleic acids (RNA) are parenterally given. In addition, they can penetrate the body's mucous membranes. Independent of the mode of the application, the RNA is distributed quickly throughout the organism. Liver and kidney have the highest uptake rate for RNA. RNA can cross the blood-brain barrier. After longer retention time (> 90 min) in the interstitium or in the serum, the RNA is enzymatically diminished. Therefore creating a depot is to be avoided.

RNA cannot diffuse passively through the lipid membranes. In low concentrations a complete uptake into the cell takes place, an active absorption is assumed. Non-ionic oligonucleotides are not taken up. Therefore a receptor with low specificity is assumed, which binds different poly anions to release the so-called endocytosis. The endocytosis indicates temperature similar to enzyme activities. The uptake of RNA into the cell is decreased at lower temperatures. The RNA taken up by the cell is found both in the cytoplasm and in the nucleus.

Effects

Usually one predominantly or exclusive thinks with the function of the RNA of its role in the protein synthesis. The functions of the RNA are however substantially more varied. In addition, they contain catalytic functions with the DNA replication and the synthesis of the ribonucleic acids themselves as well as immune-modulating effects. In the following text examples from a multiplicity of international publications were selected.

DNA synthesis

In concerns with the initiation of the DNA synthesis RNA oligonucleotides are directly involved as primers. Exogenous RNA can influence the DNA synthesis. This could be confirmed by several working groups through in vitro and in vivo experiments [1-4]. Thus also investigations of Lodemann et al. indicated in an in vitro DNA synthesising system a stimulating effect of exogenous bovine RNA on the DNA-Synthesis. Yeast RNA obtained 30% of the control value, which was received with a synthetic hexanucleotide, while RNA from different cattle organs obtained up to 83% of the control value [5].

RNA synthesis

The RNA synthesis (transcription) takes place in different selected parts of the DNA depending upon cell type. The transfer of the information into the

sequence of the single string RNA, stored in the sequence of the DNA nucleotides, takes place via different enzymes, which catalyze the synthesis of the different RNA types (i.e. ribosomal RNA [rRNA], messenger RNA [mRNA], transfer RNA [tRNA] as well as small nuclear RNA [snRNA]). The direct stimulating influence of exogenous RNA on the RNA synthesis was shown in several experiments. Grabowska et al. determined the incorporation rate of radioactive UTP into the synthesised RNA (developed in a cell-free system with chromatin from rat liver and DNA dependent RNA polymerase from E.coli). These authors found the transcription increased fivefold after addition of RNA from rat liver [6]. Kanehisa et al. as well as Dobrzelewski et al. obtained similar results in systems from live chicken DNA or calf thymus chromatin and RNA polymerase from E.coli [7-9].

Protein biosynthesis

The protein synthesis takes place in the cytoplasm on the ribosomes. Ribosomes represent multi-enzyme complexes, which catalyze the very complex processes of the accurate transfer of the linear nucleotide sequence mRNA into the amino acid sequence of the proteins (translation). All of the approximately 20 natural L-amino acids, of which the proteins are composed, are determined by a sequence of three nucleotides. An extremely large number of experiments have been performed to show the influence of exogenous RNA on the translation which were partly executed in cell-free systems and partly in cell cultures. The modification of the protein synthesis was determined usually by determination of the incorporation rate of radioactively marked amino acids. Only some examples are mentioned. Kelly et al. executed investigations in a cell-free system taken from rabbit reticulocytes, whose protein synthesis was controlled through mRNA from human placenta. Through the addition of tRNA, from different origin, there was a 2 to 5-fold increase in the incorporation of radioactive methionin into the produced total protein [10]. Kalb checked the influence of different RNA preparations on the uptake rate of radioactively marked phosphate in cultures from rat organs. Addition of cattle RNA from liver and placenta led to an increase in the phosphate incorporation rate up to 118% [11]. Amos et al. showed that the addition of RNA from chicken embryos, E.coli and from mammal liver cells in a system from chicken embryo fibroblasts led to a concentration-dependent increase in the protein biosynthesis. If the RNA was treated beforehand with RNase, the effect was removed [12].

The whole of the test results for the influence of exogenous RNA on the protein biosynthesis from the international literature permits essentially three conclusions:

1. Both entire RNA and individual fractions of different chain length can promote the protein biosynthesis when externally supplied.
2. The supply of exogenous RNA unfolds their effect both in cell-free systems and in cell cultures as well as in the living organism, which proves that externally supplied RNA is taken up to intact cells.
3. For the effectiveness strength of exogenous RNA the origin plays a substantial role concerning the "organ proximity" and the species relationship, whereby organ specificity is more important than species specificity.

Cell differentiation

The cells of a higher organism differ in their morphology and physiology clearly from each other, although the DNA is identical in all cells. The cell differentiation takes place via different selection of the DNA segments needed for the protein synthesis. Based on today's knowledge levels, a very important part of the control of the gene expression on the transcription level takes place.

Deshpande et al. showed that the incubation of post nodale chicken blastoderm cells 4th stage with a specific RNA, taken from 16 days old chicken embryo hearts, led to morphologic and biochemical modifications in the cells. In absence of exogenous RNA the cells remained undifferentiated. A measure for the degree of the differentiation was the acetylcholinesterase activity. This activity was shown in occurring rhythmic pulsation, the appearance of cross-striated muscle fibers and glycogen granulae as well as an increase in the protein biosynthesis of actin and myosin in the magnitude of 3 to 4 fold. These processes resembled embryonic differentiation of heart cells [13-14]. Similar results were found by McLean et al. [15] and Butros et al. [16].

Immune system

The immune-modulating effect of RNA is not a uniform process, but consists of a whole set of mechanisms. Thus Strayer and Lacour through the example of synthetic double stranded RNA showed the fact that their anti-carcinogenic effect is based on the anti-proliferative effect of induced interferon [17], the induction of the cellular and humoral immune response, the stimulation of the protein kinase and on the activation of the killer cells [18]. According to Strayer the advantages of the RNA therapy in relation to the classical interferon therapy was the activation of many intracellular mediators, the simultaneous induction of several interferon species and in combination with interferon, the overcome of the cellular resistance toward interferon [17].

All natural and synthetic ribonucleic acids as well as their derivatives are among the most effective interferon inductors known at this time. They are an intrinsic component of the interferon induction mechanism. The ribonucleic acids origin thereby seems to be insignificant [19]. An even interferon formation took place, as Taborsky et al. could show, after the treatment of human blood lymphocytes, polymorphonuclear leukocytes and monocytes with double stranded RNA from the cells of E.coli, which were infected with f2-Phages. The interferon preparations pointed to typical features of human interferon [20].
The interferon-inducing effect of RNA from various cattle organs was proven with mice by Wacker et al.. The maximum concentration-dependent interferon induction was achieved after 18 hours and amounted to approximately 50% of the induction through the synthetic nucleotide PolyIC applied in a human toxic range [21]. Lodemann et al. examined the effect of exogenous RNA on the activity the oligoadenylate synthetase in lymphocyte cultures from human serums. The oligoadenylate synthetase, one of the mediatores of the interferon effect, whose activity increase is accompanied with an increase of the interferon level in the serum, gained around 17% (statistically significantly with $p<0,001$). The results were acknowledged through in vivo administration on a group of 9 patients. A clearly measurable increase in activity of the oligoadenylate synthetase in the lymphocytes was also here observed [5].
Other working groups determined the positive effect of exogenous RNA on the number and activity of the macrophages [22-23], the humoral immune system [24] as well as on the primary and secondary immune response [25-28].

Hormone-like effects

The hormone-like effects of exogenous RNA, or their stimulating effects on the endocrine system, are due to the organ-specific stimulation of the protein synthesis of the glands concerned. It was possible to induce by means of exogenous RNA (from animal experiments) estrogen-like [29-33], androgen-like [34-36] and thyroid hormone-like [37] effects through numerous working groups.

Summary

The multipurpose therapeutic application possibility of RNA is based thus on its polyvalent effect spectrum and its ability to physiologically modulate the metabolic and the immune system in the organism on different functional levels. In each tissue structurally different RNA, whose composition depends on the nucleotide sequence of the DNA used for

transscription, determines the biosynthesis of the organ-specific proteins.
In addition to its central function for protein synthesis, RNA has various other functions concerned with the preservation of physiological cell regulation. Thus they intervene also regulatory function in DNA synthesis, in the cell differentiation and in immunological processes.
In several independently executed studies it was shown that the RNA effect is organ-specific and it follows that organ specificity is more important species specificity. The influence of REGENERESEN® on the different processes of the metabolism leads in its whole to faster stimulation of diminished functional cell activity as well as to a reinforcement of the regeneration and re-growth of damaged tissue.

Dosage instruction and type of application

The therapy with REGENERESEN® is a non-standardized treatment for each individual patient and can be therefore only to a limited extent generalized. Selection and dosage of the types depend on duration and strength of the disease, the age of the patient, the observed healing tendency etc..
Experiences of many years have shown that the application of at least 20 ampoules, assembled from one or a combination of several types from single REGENERESEN®, AU 4 REGENERESEN®, RN 13 REGENERESEN® and OSTEOCHONDRIN® S, per patient and treatment is meaningful. The therapy can be executed in such a way that each second day 2 ampoules are given, according to a weekly dose of 6 ampoules. Depending upon situation of the case the weekly dose, between 4 and 12 ampoules, can be varied. Following the completion of the treatment an observation time of 6-8 weeks is appropriate. Then it is to be decided on the basis whether the resulting findings obtained corresponds to expectations and if not is it meaningful for a prolonged or subsequent treatment with REGENERESEN® injections.

All single REGENERESEN®, AU 4 REGENERESEN®, RN 13 REGENERESEN® and OSTEOCHONDRIN® S are among themselves completely compatible. In any case, mixtures with other injection preparations are to be avoided for safety reasons.

The injection is to be administered intramuscularly, normally into the upper outside quadrant of the glutaeus. Opened ampoules are to be injected immediately, since otherwise sterility is no longer ensured. Only clear solutions may be used.
Child dosage: detailed dosage suggestions on request available.

Selection of the suitable REGENERESEN® types for a given therapeutic problem

When considering each disease for treatment the therapist should consider which organs or organ systems are responsible for the symptomatology. For the current support of therapists arranging therapy with REGENERESEN® a therapy advisory service is available. Forms for written therapy inquiries (in the middle of the brochure) can be requested at any time. Also telephone therapy inquiries are possible. Our therapy suggestions are given only without obligation and are there only to act as a support to therapists.

Times for telephone therapy consultation:
Monday - Wednesday 8:00 a.m.- 5:00 p.m.,
Thursday and Friday 8:00 a.m.-1:00 p.m.

Mono therapy with special REGENERESEN®: RN 13 REGENERESEN®

In age complaints without certain organ emphasis, a mono therapy with 20 ampoules RN 13 for general treatment can be selected. One obtains thereby a revitalization effect in the entire system, including in most cases, a clear improvement of memory and recall ability. However, if dominating symptoms within certain organ areas are noticed, i.e. heart insufficiency, impaired perfusion or a organic brain syndrome, then preference should be given for a combination of an individualized treatment program with single organ REGENERESEN®.

OSTEOCHONDRIN® S

All peripheral arthrosis and light to moderately severe wear of the spinal column can be treated with a mono therapy of 20 - 30 ampoules OSTEOCHONDRIN® S. More serious diseases of the spinal column and joints, osteoporosis and all inflammatory rheumatism diseases should be considered for a combination REGENERESEN® therapeutic treatment.

AU 4 REGENERESEN®

The mono therapy with AU 4 REGENERESEN® is not common; each case from the problem area internal ear (like hearing disorders and tinnitus) requires an individualized combination therapy.

Combined therapy (from single organ and special REGENERESEN®)

The more over the disease history of a patient and the releasing causes of its onset is known the better. Then the individualized therapy with REGENERESEN® against the disease can be optimally adopted. The absence of information of this type directs the therapy toward the symptoms and therefore the desired therapeutic goal may not be fine tuned.

Detailed example: therapy possibilities for Osteoporosis

Concerning **preclinical osteoporosis**, we would recommend the following combination of REGENERESEN®, whereby OSTEOCHONDRIN® S improves the general joint functions, osteoblasts or vertebra to stimulate the osteogenesis and the remaining organs to normalize the hormone status and the calcium metabolism:

per 10 - 15 amps.	OSTEOCHONDRIN® S
5 amps.	osteoblasts (or vertebra)
per 2 - 3 amps.	connective tissue, ovary or tesis, hypothalamus, hypophysis, thyroid
1 amp.	parathyroid glands

In the case of **manifest osteoporosis** with fractures in the vertebra, necessarily becomes higher doses of osteoblasts or vertebra:

10 amps. osteoblasts or vertebra
per 3 amps. adrenal gland, ovary/testis, hypothalamus, thyroid
2 amps. hypophysis
1 amp. parathyroid glands

In postmenopausal osteoporosis, the application of the REGENERESEN® adrenal gland becomes meaningful.

With increasing age the absorption conditions for minerals in the intestine deteriorates. During **malabsorption** the emphasis of the treatment shifts to the vertebra types, RN 13 REGENERESEN®, and small intestine, so that primarily food intake is improved and better utilized.

The following must be added in the case of a **corticoid induced osteoporosis**. The impaired function of the adrenal gland wall is considered as well as the remaining organs of the inflammation feedback system:

per 5 amps. osteoblastes, adrenal gland
per 3 amps. hypothalamus, hypophysis, lymph node, thymus
2 amps. thyroid

Therapy recommendations

Dosage
The individualized dose depends on the severity of the disease, the duration of its existence, the number of the organs concerned, the age of the patient, the healing tendency etc.. Experiences of many years showed that the use of at least 20 ampoules per patient and treatment is meaningful.
Of course the indicated dosage can be increased in severe cases. Another alternative consists of taking several treatment series into account. In addition with less severe or milder cases a lower application quantity can be taken into account. It is to be also pointed out that diseases such as ALS, alzheimer, and specific genetic originating diseases should receive regular treatment series repetitions.
The following therapy recommendations should be regarded as standards and frequently require fine-tuning of the individualized treatment requirements. The treatment with REGENERESEN® has the normalization of the organ functions as a treatment goal. Often it is used as a supplement of

the medication already being used and therefore adjustment of their dosage could be necessary. This adjustment is to be executed under the control of the appropriate parameters and with consideration of the advice of the respective manufacturer.

Adrenal gland insufficiency
10-15 amps. adrenal gland
per 2-4 amps. pituitary gland, hypothalamus

Allergic diseases
per 3-4 amps. liver, lymph node, adrenal gland, thymus, diencephalon, affected organs
per 2-3 amps. connective tissue, pituitary gland, spleen, thyroid gland, testis/ovary
1-2 amps. parathyroid gland

Alzheimer´s disease (repeat of treatment necessary)
8-10 amps. cerebral hemispheres
per 4-7 amps. placenta, basal ganglia, diencephalon

Amenorrhoea
per 4-6 amps. pituitary gland fem., ovary, placenta fem., diencephalon
per 2-3 amps. thyroid gland

Anaemia
per 3-5 amps. blood, bone marrow, liver, spleen
per 2-3 amps. connective tissue, lymph node, placenta, thymus

Angina pectoris
per 5-8 amps. heart, diencephalon, RN 13
per 2-3 amps. artery, pituitary gland, adrenal gland

Anorexia nervosa
per 5-8 amps. placenta, diencephalon
per 2-3 amps. adrenal gland, pituitary gland, testis/ovary

Apoplexia –follow-up treatment-
per 4-6 amps. artery, cerebral hemispheres, diencephalon, RN 13
per 2-3 amps. pituitary gland, basal ganglia

Arteriosclerosis
per 4-6 amps. heart, vessel wall, placenta **or** 10-15 amps. RN 13
per 2-3 amps. pituitary gland, adrenal gland, diencephalon

Arthrosis
20-30 amps. OSTEOCHONDRIN® S
or
10-15 amps. OSTEOCHONDRIN® S
per 3-5 amps. cartilage, connective tissue, musculature, thyroid gland
1-2 amps. parathyroid gland

Asthma
per 4-6 amps. lung, thymus, diencephalon
per 2-3 amps. thyroid gland, testis/ovary, adrenal cortex, lymph node
1-2 amps. parathyroid gland

Ataxia
per 4-6 amps. cerebellum, spinal cord, basal ganglia
per 2-4 amps. pituitary gland, diencephalon

Basedow's disease
per 4-5 amps. lymph node, spleen, thyroid gland, thymus
per 2-3 amps. heart, pituitary gland, adrenal gland, pancreas

Bronchitis, chronic
per 4-6 amps. lung, spleen, thymus
per 2-4 amps. connective tissue, vessel wall, heart, pituitary gland, adrenal gland

Burn injury, scald injury
per 4-6 amps. connective tissue, skin, placenta
per 2-3 amps. lymph node, thymus **or** 5 amps. RN 13

Cerebral atrophy
per 4-6 amps. cerebral hemispheres, cerebellum, placenta
per 3-4 amps. mesencephalon, diencephalon

Cerebral sclerosis
per 4-6 amps. vessel wall, cerebral hemispheres, placenta
or 15 amps. RN 13
per 2-3 amps. pituitary gland, cerebellum, adrenal gland, basal ganglia, diencephalon

Cholangiopathy/Cholecystopathy
per 5-8 amps. connective tissue, liver
per 2-3 amps. large intestine, small intestine, stomach, pancreas

Choroidal sclerosis
10-15 amps. RN 13
per 3-5 amps. choroid membrane, connective tissue, retina

Climacterium
per 3-5 amps. pituitary gland, ovary/testis, diencephalon
or 10-15 amps. RN 13
per 2-3 amps. adrenal gland, placenta, thyroid gland

Colitis
per 3-5 amps. large intestine, small intestine, liver, pancreas
per 2-3 amps. pituitary gland, adrenal gland, thymus, testis/ovary, diencephalon

Coronary sclerosis
per 4-6 amps. vessel wall, heart, placenta **or** 15 amps. RN 13
per 2-3 amps. pituitary gland, adrenal gland, diencephalon

Coxarthrosis see Arthrosis

Cretinism
per 4-6 amps. cerebral hemispheres, placenta, thyroid gland, diencephalon
per 2-3 amps. pituitary gland, adrenal gland, testis/ovary

Cryptorchism
per 4-6 amps. pituitary gland, testis, diencephalon

Defence weakness
10-15 amps. RN 13
per 2-5 amps. connective tissue, bone marrow, lymph node, spleen, thymus

Depression, endogenous
per 5-10 amps. RN 13, thymus, diencephalon
per 2-4 amps. pineal body, pituitary gland, mesencephalon

Diabetes insipidus
10-15 amps. RN13
per 3-5 amps. pituitary gland, diencephalon

Diabetes mellitus II
per 5-8 amps. pancreas, liver, RN 13
per 2-4 amps. hypothalamus, pituitary gland, adrenal gland

Disturbance of perfusion, peripherial
per 4-6 amps. vessel wall, placenta or 15 amps. RN 13
per 2-3 amps. pituitary gland, adrenal gland, diencephalon

Dysmenorrhoea
per 4-5 amps. connective tissue, ovary, placenta fem.
per 3-4 amps. pituitary gland fem., adrenal gland, diencephalon

Eczema
per 4-6 amps. skin, liver, placenta
per 2-3 amps. pituitary gland, adrenal gland, diencephalon

Emphysema
per 4-6 amps. connective tissue, vessel wall, heart, lung
per 2-3 amps. adrenal gland, thyroid gland
or age emphysema: 5 amps. RN 13

Encephalitis
per 5-8 amps. cerebral hemispheres, placenta, thymus
per 2-4 amps. lymph node, diencephalon

Endometritis, chronic
per 4-5 amps. ovary, placenta fem., diencephalon
per 3-4 amps. pituitary gland fem., adrenal gland

Dermatosclerosis
per 4-6 amps. connective tissue, skin, RN 13
per 2-4 amps. pituitary gland, spleen, thymus, diencephalon

Developmental disturbances
per 4-6 amps. thymus, diencephalon
per 3-4 amps. pituitary gland, adrenal gland,
thyroid gland, testis/ovary
(infantil: pineal body)

Fatty liver
per 6-8 amps. liver, pancreas
per 2-4 amps. spleen, pituitary gland, diencephalon

Fertility, the disturbance of
per 4-6 amps. placenta, testis/ovary, diencephalon,
(with men additionally prostate)
per 2-3 amps. pituitary gland, adrenal gland, thyroid gland

Fractures
per 5-8 amps. osteoblasts, placenta
per 3-4 amps. vessel wall, bone marrow, thyroid gland

Frigidity
per 3-5 amps. mesencephalon, placenta, testis/ovary, diencephalon
per 2-3 amps. pituitary gland, adrenal gland, thyroid gland

Gastritis, chronic
per 4-6 amps. liver, stomach, adrenal gland, pancreas, placenta,
per 2-4 amps. pituitary gland, diencephalon

Glaukoma
per 5-15 amps. RN 13, lens of the eye, (optional : optic nerv)

Growth anomalie
per 4-6 amps. thymus, diencephalon
per 3-4 amps. pineal body, pituitary gland, adrenal gland,
thyroid gland, testis/ovary

Hay fever
4-6 amps. connective tissue
per 3-4 amps. liver, adrenal gland, thymus, diencephalon
per 2-3 amps. pituitary gland, lymph node, thyroid gland, testis/ ovary
1-2 amps. parathyroid gland

Hearing disturbances -toxic and pharmaceutically caused-
per 6-10 amps. AU 4, placenta
per 2-4 amps. vessel wall, diencephalon

Heart attack –follow-up treatment-
per 5-10 amps. heart, RN 13
per 2-5 amps. connective tissue, vessel wall, pituitary gland,
adrenal gland, diencephalon

Hepatitis, chronic
8-12 amps. liver
per 2-3 amps. lymph node, stomach, spleen, adrenal gland, pancreas, placenta, thymus

Hepatosis
> 10 amps. liver
per 2-4 amps. large intestine, small intestine, stomach, spleen, pancreas

Hypertonus
per 4-6 amps. vessel wall, heart, kidney, diencephalon
per 2-3 amps. pituitary gland, adrenal gland

Hypothyreosis
per 4-6 amps. thyroid gland, diencephalon
per 2-4 Amp. pituitary gland, adrenal gland, parathyroid gland

Hypotonus
per 4-6 amps. heart, adrenal gland, diencephalon
per 2-3 amps. pituitary gland, liver, placenta

Immune defence
10-15 amps. RN 13
per 2-5 amps. connective tissue, bone marrow, lymph node, spleen, thymus

Infantilism
per 4-6 amps. thymus, diencephalon
per 3-4 amps. pituitary gland, adrenal gland, thyroid gland, testis/ovary

Inner ear deafness -degenerative-
per 6-10 amps. AU 4, placenta, vessel wall

Intermittent claudication
per 4-6 amps. vessel wall, heart, placenta **or** 15 amps. RN 13
per 2-3 amps. pituitary gland, adrenal gland, diencephalon

Lateral sclerosis, amyotrophic (ALS)
(repeat treatment necessary)
per 2-3 amps. cerebellum, lymph node, medulla oblongata, mesencephalon, musculature, thymus, spinal cord, cerebral hemispheres, basal ganglia

Menière's disease
per 6-10 amps. AU 4, vessel wall, placenta

Multiple sclerosis
(repeat at least 2 times per year)
per 2-3 amps. cerebral hemispheres, cerebellum, bone marrow, lymph node, medulla oblongata, placenta, spinal cord, basal ganglia, thymus

Muscular atrophy, myopathic or neuropathic
(longterm treatment required!)
8-10 amps. spinal cord
per 2-3 amps. lymph node, musculature, basal ganglia, thymus, diencephalon

Muscular dystrophy
(longterm treatment required!)
8-10 amps. musculature
per 2-3 amps. heart, spinal cord, basal ganglia, thymus, diencephalon

Nephritis, chronic
4-6 amps. kidney
per 2-4 amps. connective tissue, pituitary gland, hypothalamus, lymph node, adrenal gland, thymus

Nephrosis
per 10-15 amps. kidney
per 2-4 amps. pituitary gland, adrenal gland, thyroid gland, diencephalon

Neurasthenia
10-15 amps. RN 13
4-6 amps. diencephalon
per 2-3 amps. pituitary gland, testis/ovary

Neurodermatitis
per 4-6 amps. skin, diencephalon
per 2-4 amps. pituitary gland, liver, adrenal gland, thyroid gland, testis/ovary
1-2 amps. parathyroid gland

Osteochondrosis
10-20 amps. OSTEOCHONDRIN® S
per 4-6 amps. intervertebral disc, vertebra

Osteoporosis -see example on page 13-

Osteosclerosis
per 4-6 amps. connective tissue, bone marrow, OSTEOCHONDRIN® S, vertebra
1-2 amps. parathyroid gland

Pancreatopathy
6-8 amps. pancreas
per 3-5 amps. liver, stomach, large intestine, small intestine

Panmyelophthisis
per 4-6 amps. bone marrow, spleen, connective tissue, liver
2-4 amps. adrenal gland

Paralysis
8-12 amps. cerebral hemispheres
per 3-5 amps. cerebellum, medulla oblongata, mesencephalon, spinal cord, basal ganglia
per 2-3 amps. pituitary gland, diencephalon

Parkinson's disease
per 4-5 amps. mesencephalon, basal ganglia, diencephalon
per 2-3 amps. pituitary gland, cerebellum, medulla oblongata

Performance weakness
20-30 amps. RN 13

Pneumonia, chronic
per 4-6 amps. connective tissue, lung, placenta
per 2-4 amps. lymph node, adrenal gland, testis/ovary, thymus

Polyarthritis, chronic
per 5-10 amps. OSTEOCHONDRIN® S
per 2-3 amps. connective tissue, hypothalamus, pituitary gland, lymph node, spleen, adrenal gland, testis/ovary, thymus

Presbyacusis
6-10 amps. AU 4
10-15 amps. RN 13

Prostate hypertrophia
per 3-5 amps. adrenal gland, placenta masc., prostate, testis
per 2-4 Amp. pituitary gland masc., hypothalamus

Prostatitis, chronic
per 4-6 amps. connective tissue, adrenal gland, placenta masc., prostate, testis, thymus

Psoriasis
per 5-10 amps. skin, RN 13

Retinopathy
10-20 amps. RN 13
per 3-6 amps. choroid membrane, mesencephalon, retina, diencephalon

Sexual dysfunction
per 4-6 amps. testis, adrenal gland, RN 13
per 2-3 amps. diencephalon, pituitary gland masc.

Sudden deafness
per 6-8 amps. AU 4, vessel wall, placenta, diencephalon

Tetany -parathyroid-
per 5-6 amps. RN 13, thyroid gland, diencephalon
per 2-3 amps. pituitary gland, parathyroid gland

Thrombocytopenia
per 4-6 amps. bone marrow, liver, spleen, placenta
per 2-4 amps. pituitary gland, thymus, diencephalon

Thyroid gland function disturbance
(with disturbed regulatory system)
per 4-6 amps. heart, thyroid gland, diencephalon
per 2-3 amps. pituitary gland, adrenal gland

Tinnitus
for this indication is a specific diagnosis form obtainable in german language

Ulcer, duodenal
per 4-5 amps. small intestine, liver, stomach, pancreas
per 2-3 amps. pituitary gland, placenta, diencephalon

Ulcus cruris (chronic leg ulcer)
per 4-6 amps. connective tissue, vessel wall, heart or 15 amps. RN 13
per 2-3 amps. pituitary gland, adrenal gland, diencephalon

Vegetative dysregulation
10-15 amps. RN 13
per 2-5 amps. pituitary gland, diencephalon, affected organs

Vertebra column syndrom
15-20 amps. OSTEOCHONDRIN® S
(per 4-6 amps. facultative: connective tissue, spinal cord, vertebra, intervertebral disc, musculature)

Wound healing disturbances
per 4-6 amps. connective tissue, skin, placenta, RN 13

Alphabetical directory Regeneresen®

			Pharma-central-Nr.:
adrenal cortex		cortex gland. suprarenalis	1214039
adrenal gland	(•)	gland suprarenalis total	1214045 / 7124283
adrenal medulla		medulla gland. suprarenalis	1214022
artery		arteria	1213910
basal ganglia		systema extrapyramidale	1213850
bone marrow		medulla ossium	1213577
cartilage		cartilago	1213583
cerebellum		cerebellum	1213560
cerebral hemispheres	(•)	hemisphaeria cerebri	1213488 / 4301402
choroid membrane		chorioidea	1213353
connective tissue	(•)	mesenchyma	1213382 / 7124277
diencephalon	(•)	diencephalon	1214157 / 4301514
pineal body		gland. pin., corp. pineale	1213927
heart	(•)	cor	1213531 / 4301419
hypothalamus		hypothalamus	1214016
intervertebral disc		discus intervertebralis	1213376
kidney	(•)	ren	1213732 / 4301431
large intestine		intestinum crass.	1213436
lens of the eye		lens	1213614
liver	(•)	hepar	1213608 / 4301425
lung		pulmo	1213620
lymph node		nodi lymphatici	1213637
medulla oblongata		medulla oblongata	1213666
mesencephalon		mesencephalon	1213689

musculature		musculus	1213695
optic nerve		optic nerv	1213726
osteoblasts		osteoblasti	1499639
ovary	(•)	ovarium	1214080 / 4301448
pancreas	(•)	pancreas	1213778 / 4301477
parathyroid gland		glandula parathyreoidea	1214051
pituitary gland total fem.		gland. hypoph. total fem.	1213985
pituitary gland total masc.		gland. hypoph. total masc.	1213991
placenta fem.	(•)	placenta fem.	1214097 / 4301454
placenta masc.	(•)	placenta masc.	1214105 / 4301460
prostate		prostate	1213809
retina		retina	1213815
skin		cutis	1213525
small intestine		intestinum tenue	1213442
spinal cord		medulla spinalis	1213821
spleen		lien	1213672
stomach		ventriculus	1213643
synovia		synovia	1213838
testis	(•)	testis	1214128 / 4301483
thalamus		thalamus	1214134
thymus	(•)	glandula thymi	1213873 / 4301508
thyroid gland		glandula thyreoidea	1214111
urinary bladder		vesica urinaria	1213519
vertebra		vertebra	1214140
vessel wall		intima	1213471

Spezialpräparate:

AU 4 REGENERESEN®	(•)	1214163 / 4301520
OSTEOCHONDRIN® S	(•)	1687039 / 308383
RN 13 REGENERESEN®	(•)	1583357 / 1583363

indicated for variety, that are also obtainable as OP of 5 ampoules : (•)

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Name and address of therapeut

Dyckerhoff Pharma GmbH & Co. KG
Robert-Perthel-Straße 49

50739 Köln

Confidential

Request for therapy recommendation with

REGENERESEN®

Name of patient:

_____

Age:_____ Sex:_____ Stature:_____ Bodyweight:_____

Anamnesis: (incl. manifest gout, phenylketonuria and other reduction defects of phenylalanine):

_____

_____

_____

Diagnosis: _____

_____

_____

Current findings: (symptoms, clinical and lab. findings; include copies if necessary).

_____

_____

Current medication: _____

_____

_____

Other therapies: _____

_____

Therapeutic aim: _____