HOMEOPATHIC MIASMS AND HEREDITY

PART I: THE GENOME AND EPIGENOME

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Summary

The 'chronic' miasms can partly be considered as an inherited amalgam of hundreds of genes that are present in the DNA of every individual, and that have been present throughout thousands of years. Depending on the lifestyle and the recent miasmatic-related infections during the life of the latter generations and that of the present individual, these chronic miasms will be more or less active or activated. These specific modulations are more or less influenced by epigenetic mechanisms.

From the energetic point of view the **chromosomes are also the carriers of the ancestral energy** which is the hereditary energy coming from the ancestors. An ancestral energetic layer influences the stability of the DNA and the surrounding chromatin proteins**.**

By the use of nosodes, which are directly related to the ancestral energy, the energetic field around the chromatin can be kept stable.

On the other hand, wrong homeopathic remedies can disturb the expression of this hereditary energy.

So we see that energy and matter are in continuous dialogue via epigenetic mechanisms.

Keywords: Miasms, Chromosomes, DNA, Epigenetics, Heredity

In this article we discuss heredity first from the actual biochemical (and quantum) approach and then we try to make a link with the classical homeopathic approach. This divides this article into two parts that will be published subsequently:

PART I: THE GENOME AND EPIGENOME

PART II: LINK BETWEEN GENETICS AND EPIGENETICS AND HOMEOPATHIC MIASMS

Introduction

From the *biochemical* point of view:

Evolution happens not only by natural selection (due to genetic selection) but also by actual adaptation (due to epigenetic mechanisms and epigenetic inheritance).

- **Natural selection** is the process by which traits become more or less common in a population due to consistent effects upon the survival or reproduction of their bearers. It is a key mechanism of evolution (Darwinian evolution).
- **Epigenetic mechanisms** influence when genomic imprints are initiated, maintained, or erased, which results in (quicker) development or (long-term) prevention of disease.

From the *energetic* point of view:

Genomic and epigenomic expressions are primarily induced by energetic signals, e.g. electro-magnetic signals emitted from the DNA, which activate biochemical processes. The (incarnated) personal and inherited ancestral energy plays a primordial role in directing these signals.

PART I: THE GENOME AND EPIGENOME

Chromatin is the complex of DNA and proteins, consisting of nucleosomes around which DNA is wrapped, and other proteins in the nucleus of eukaryotic cells.

The DNA-helix consists of DNA (deoxyribo nucleic acid) which is a linear polymer made up of four different monomers, each composed of a sugar, a phosphate and a base. The nitrogenous base pairs are adenine/thymine and guanine/cytosine and its backbone is built of repeating sugar-phosphate units, from which protrude variable substitutes. The sugars are molecules of deoxyribose joined to one of the four possible bases (Crick and Watson, 1953).

DNA is considered as a stable storage for genetic information that contains the genetic code, which is a map of nucleotide triplets that codes for the amino acids of the specific proteins.

The DNA-helix is wrapped around a **structure of histone proteins** that makes a compact storage possible.

Eight histone proteins form a nucleosome core particle. The winding of DNA around the histone octamers results in a decrease of its linear extent by a factor of seven. The nucleosome is just the first step in DNA compaction. The next step is that the nucleosomes are arranged in a helical array (consisting of six nucleosomes per turn), forming series of stacked layers.

Each histone has an amino-terminal tail that extends out from the core structure. This tail is flexible and contains a number of lysine and arginine residues that regulate the affinity for DNA by acetylation and deacetylation.

The conventional view of the former decades was that DNA, in its sequence, carries 'all' the hereditary information and even that which individuals do not acquire or express in their lifetime, and that all this information is biologically transmitted to the probands (proband: the first affected family member who seeks medical attention for a genetic disorder).

In an unrolled state the DNA of the whole genome is two metres. Only 2% of it codes for proteins and determines the specific features of the individual. The biggest part of the DNA consists of sequences that don't code for proteins. Not all genes come to expression. Some genes are made silent by epigenetic mechanisms (= **silencing**) – see, below.

In the above-mentioned 2% of the genome which comes to expression, the gene expression is **tissue related**: its specific genes determine the individual character of the tissues.

There is also the 98% non-coding DNA, the so-called junk DNA.

In that junk DNA there are a lot of unstable tandem repeats of pieces of DNA which have an important role in the gene expression because those repeats of pieces of DNA influence the wrapping structure of the DNA by chromatin proteins. (Science, 2009 May 29)

When something goes wrong with this **expression profile**, disease can develop.

Recent evolution about insights concerning DNA

Now the **epigenetic theory** adds a whole new layer to genes beyond the DNA.

Biology stands on the brink of a shift in the understanding of inheritance by the discovery of epigenetic hidden influences upon the genes. Scientists discovered, when examining the genome, that the number of genes was less than expected according to the numerous functions, and also their sequence is insufficient to understand human diversity and complexity.

Besides only a few diseases are due to a structural gene defect and most diseases are related to a large number of genes, sometimes even hundreds.

That's why they started to pay attention to the chemical reactions around the DNA-helix.

So the idea that inheritance is not just about which kind of genes one inherits but also **which of these are switched on or off** is a whole new frontier in biology. It raises questions with huge implications to find what sort of environmental effects can affect these switches. So the perfect

stabilization of the chromatin proteins around the DNA is needed to keep the patient in good health.

Epigenetics is the study of the heritable and reversible changes in phenotype (appearance) or gene expression caused by mechanisms 'other than changes in the underlying DNA sequence.' These changes are generated in the actual life of the individual or in the life of the parents or grandparents ....

The best example of epigenetic changes in eukaryotic biology is the process of cellular differentiation. During morphogenesis, totipotent stem cells become the various pluripotent cell lines of the embryo, which in turn become fully differentiated cells. In other words, a single fertilized egg cell – the zygote – changes into the many cell types including neurons, muscle cells, epithelium, blood vessels etc. as it continues to divide. It does so by activating some genes while inhibiting others.

Normally this process is irreversible.

Epigenetic mechanisms include various enzyme-catalysed chemical modifications of genomic DNA (methylation of cytosine residues in CpG dinucleotides) and histone chromatin proteins (methylation, acetylation, phosphorylation, ubiquitinylation, etc.), which recruits other proteins such as transcription factors and repressors, that together, determine the activity state of specific genes or sets of genes.

Methylation is a key mechanism in epigenetics.

Methyl groups, each connected with a base of the DNA, are 'flag markers' which regulate the gene expression.

A lot of those methyl groups on the DNA stay very stable through generations and consequently function as the markers of some epigenetic imprints by which people / families distinguish themselves from other people / families. They can be heritable which explains why some families are more susceptible to some diseases than other families.

For example the team of the university Johns Hopkins discovered about thirteen locations on the DNA, which are in relation with the body mass index.

(Andrew Feinberg et al, University Johns Hopkins (Maryland), 2008: *Sci Transl Med* 2010;2(49):49Ra67)

Epigenetic mechanisms

Epigenetic mechanisms are affected by these factors and processes (with, as a result, an influence on the phenotype expression). After a short introduction we will discuss the following seven factors and processes:

1. Nutrition and lifestyle even have a transgenerational effect: development in utero / childhood; methyl groups in some dietary sources
2. **Stress** can modify the gene expression
3. Infections
4. RNA dependent silencing
5. Drugs / environmental chemicals / **nutrition**
6. Aging
7. From the homeopathic point of view energetic processes will also influence gene expression via electro-magnetic signals which find their explanation in the framework of the quantum field theory.)

Introduction: Genes have a memory of their origin

Marcus Pembrey, a Professor of Clinical Genetics at the Institute of Child Health in London, started studying this matter because he was fascinated by the paradox that the same genetic mutation, chromosome 15q partial deletion, causes Prader-Willi syndrome when it is inherited from the father and Angelman syndrome when inherited from the mother. So, even when the DNA sequence is the same, the kind of disease dependent on it can be inherited from the father or mother.

He concluded that genes have a memory of their origin. His conclusion was that one gene or a lot of genes related to one disease cannot explain everything.

1. Nutrition and lifestyle have a transgenerational effect

In a remote town in northern Sweden he found an evidence for this radical idea. He used the Överkalix's parish registry of births and deaths of the 19th century and the detailed harvest records of that time, which confounded traditional scientific thinking. In collaboration with Swedish researcher *Lars Olov Bygren,* he found evidence in these records of an environmental effect being passed down the generations. It has shown that a famine at critical times in the lives of the grandparents can affect the life expectancy of the grandchildren. This was the first evidence that an environmental effect can be inherited in humans.

What kind of lifestyle a person's parents and grandparents had appeared to have a significant impact on their risk of cardiovascular disease and diabetes, Bygren's team reports in the *European Journal of Human Genetics* (2002;10:682-688). People whose relatives had lived through a famine have a lower risk of disease, according to the report. For people whose fathers did not have enough food during the "slow-growth" period of childhood before puberty, their risk of cardiovascular disease was lower than normal. To a lesser extent, the same was true for people whose paternal grandmother had lived through a famine.
Similarly, having a paternal grandfather who had lived through a famine was associated with a lower risk of diabetes. But if a paternal grandfather had plenty of food during his 'slow-growth' period, his grandchildren were about four times more likely to die with diabetes.

So environmental factors experienced in a man 'during the maturation of the spermatogenesis process before puberty' and in a woman 'during her intra-uterine (foetal) period when the **egg cell** lineage determination in F(n-2) gestation takes place' can cause a transgenerational epigenetic effect. The opposite effect was observed for females—the paternal (but not maternal) granddaughters of women who experienced famine while in the womb (and their eggs were being formed) lived shorter lives on average. [Bygren et al 2001; Kaati et al 2002]

2. Stress can modify gene expression

Although the mechanisms involved in humans are not yet known, this kind of transgenerational effect is being taken more seriously because similar effects - now described as 'epigenetic inheritance' - have been documented in a substantial number of animal studies.

For example:

- 'Caring Mothers Reduce Response to Stress for Life' (*Institute of Science in Society*, Report 07/09/2004): How an adult rat responds to stress was found to depend on whether its mother cared for it adequately as a pup, which marks certain genes for the rest of its life.
- 'Caring Mothers Strike Fatal Flow against Genetic Determinism' (*Institute of Science in Society*, Report 14/01/2009): It has been estimated in primates that up to 70 per cent of abusive parents were themselves abused, and 20 to 30 per cent of abused infants are likely to become abusers.

3. Infections can modify the gene expression

According to Professor Steffen Gay, Experimental Rheumatology, University of Zurich: Most diseases are probably due to changes in the gene expression by **infection** or other environment factors. Only a few diseases are due to a structural gene defect.

Incorporation of DNA material in the genome (DNA) is theoretically possible.

- Transposons: little pieces of DNA, which move freely, and which can incorporate themselves in the DNA of the genome because they can produce the transposase enzyme that splits the genome DNA before incorporation.

- Bacteria: E.g. it is known that some pathogens such as *Listeria monocytogenes* or *Shigella flexneri** can interfere with the infected cell epigenome by dephosphorylating Ser10 of histone H3 (H3S10). Phosphorylated H3S10 is important for transcriptional elongation. [Arbibe et all 2007]

Even incorporation of RNA material in the genome (DNA) is theoretically possible, after the action of ribonucleotide reductase. (Ribonucleotide becomes deoxyribonucleotide by the intermediary action of ribonucleotide reductase.)

- Viruses: especially retro-viruses. E.g.: Retroviral integration of the XMRV provirus: To produce proviral DNA, the retroviral RNA genome is converted to a double-stranded DNA by the viral enzyme reverse transcriptase. This step occurs in the cytoplasm. Specific and efficient insertion of the viral DNA into the host cell DNA is catalysed by a viral enzyme called **integrase**. This enzyme recognizes and nicks the two ends of viral DNA, and the new 3′-ends are then joined covalently to the host DNA at staggered nicks made by integrase. (Kim et al 2008)

Moreover some (chronic) bacterial and viral infections can probably influence the genomic expression of the host cell by their emission of electro-magnetic signals (cf. the research work of Luc Montagnier - 2010).

4. RNA-dependent silencing

RNA interference (**RNAi**) is a system within living cells that takes part in controlling which genes are active and how active they are. Two types of small RNA molecules – microRNA (miRNA) and small interfering RNA (siRNA) – are central to RNA interference. RNAs are the direct products of genes, and these small RNAs can bind to specific other RNAs and either increase or decrease their activity, for example by preventing a messenger RNA from producing a protein. RNA interference has an important role in defending cells against parasitic genes – viruses and transposons – but also in directing development as well as gene expression in general.

The DNA that codes for miRNA is longer than the active miRNA and contains also a sequence followed by an opposite complement by which a double-stranded loop is formed on the single-stranded RNA (pri-miRNA). Then by the action of an enzyme the looping is cut off and the formed pri-miRNA can be transported by a carrier protein from the nucleus to the cytoplasm. There about 20 nucleotides are cut off by the RNAse III endonuclease enzyme which results in the active miRNA that is delivered at the RISC (RNA-induced silencing complex).

So miRNA (microRNA) is a type of non-coding RNA of about 20 to 25 nucleotides, that is complementary to a part sequence of one or more mRNA's in the area 3' UTR. By forming a double strand with mRNA the transcription of that mRNA to a protein is blocked.

Now: more than 500 miRNA's are known that influence cancer genesis.

5. Drugs / environmental chemicals / nutrition

Gene expression can change by mediation of signals, hormones from the environment (e.g. oestrogens in water) and even food. Food containing much methyl groups can tag the DNA and activate or repress genes.

6. Aging

Mario F. Fraga and Manel Esteller (2007): 'Aging epigenetics' is focused on the functional and biological significance of the epigenetic alterations that accumulate during aging and are important in tumour genesis. Paradigmatic examples are provided by the global loss of DNA methylation, histone modifications and RNA alternations in aging and cancer and by the promoter hypermethylation of genes with a dual role in tumour suppression and progeria, such as the Werner syndrome (*WRN*) and lamin A/C genes. Another twist is provided by sirtuins, a family of NAD-dependent deacetylases that act on Lys16 of histone H4, which are emerging as a link between cellular transformation and lifespan.

Note: Aging means that there is also a progressive weakening of the vital force and immune system so that hereditary weaknesses surface together with the action of free radicals that cause a quicker degeneration.

7. Quantum physics: by transmitting energetic signals (without chemistry [JT1]mediation)

Some researchers are proposing the possibility of some signal transfer.

To the present some biochemical mechanisms have been used to explain epigenetics. But these mechanisms are insufficient to explain the hierarchical order in epigenetic phenomena. By the research work of e.g. Luc Montagnier we know that electro-magnetic signals are emitted from the DNA. Such mechanisms explain better the transfer of 'conducting' signals than the proposed biochemical reactions that are only the result of the conducted transfer of information.

In 2009, Nobel laureate Luc Montagnier published two controversial research studies which, if true, would be the most significant experiments performed in the past 90 years, demanding re-evaluation of the whole conceptual framework of modern chemistry. The concept of his research concerns the transmission of DNA genetic information into water.

On 28 June 2010, Luc Montagnier spoke at the Lindau Nobel laureate meeting in Germany, where 60 Nobel Prize winners had gathered, along with 700 other scientists, to discuss the latest breakthroughs in medicine, chemistry and physics. He stunned his colleagues.... when he presented a new method for detecting viral infections that bore close parallels to the basic tenets of homeopathy.

He confirms that the high dilutions of something are not nothing. They are water structures that mimic the original molecules (nanostructures). He did admit that he wasn't working with the very high dilution levels normally used in homeopathy. In his research work he found that with DNA, he cannot work at the extremely high dilutions used in homeopathy; he used to not go further than a 10^{-18} dilution because if he goes further he loses the signal. But even at 10^{-18}, you can calculate that there is not a single molecule of DNA left. And yet we detect a signal.

Note: A typical homeopathic example is that of 'suppression', by which some genes are directly suppressed and other become activated so that even a metastasis can happen.

So quantum physics will probably explain the (direct) signal transmission from the periphery to the centre of the individual when things happen in his personal life in a pure energetic or emotional way by which a deep blockage or metastasis can arise.

Note: the reverse mechanism happens when the correct homeopathic remedy is administered, by which energetic action a releasing happens.

Conclusion

When something goes wrong with the **gene expression profile**, disease can develop.

Most diseases are probably due to changes in the gene expression by **infections** or other environmental factors. Only a few diseases are due to structural gene defects.

Viruses, prions, RNA molecules and 'responsive' DNA-sequences or transmission of a particular epigenetic state can theoretically mediate transgenerational effects. [Pembrey et al 2006]

So, biochemical researchers have enlarged the definition of epigenetic modifications by adding that epigenetic modifications also encompass a great variety of mechanisms acting not just at transcription but at post-transcription and translation, even so far as the rewriting of genomic DNA.

If we consider the results of the current research, epigenetics is a kind of 'memory" transmitted through generations.[1] Also in the scientific environment the genetic information is no longer seen as something static but as something that is flowing. **This idea of the "flowing of the genetic information" corresponds to the concept of miasms in homoeopathy**. As homoeopaths we all know the importance of the familiar antecedents and **the state of being of the mother during pregnancy** in our analysis.

Part II of this article will be published in the next issue of LINKS. In it the link between genetics and epigenetics and homeopathic miasms will be discussed.

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[1] Epigenetic modifications occur in cell differentiation, so that different genes are expressed, different messages are altered, say in brain cells as opposed to skin cells, and they are inherited by the daughter cells in cell division. Most epigenetic changes are 'erased' in the germ cells that produce the next generation (DNA methylation is studied in greatest detail in this respect), but some modifications survive, and are passed on to the next generation. We shall be dealing with different examples in other articles in this series.

PART II :
LINK BETWEEN GENETICS AND EPIGENETICS AND HOMEOPATHIC MIASMS

The term 'miasm' from a homoeopathic view:

Hahnemann defines the 'miasms' as the fundamental energetic cause of disease.

Yet he created also confusion by using the word miasm also for nosologic entities.
When Hahnemann found a disease, having always the same cause or having always the same lesion or having always the same symptoms, he spoke of 'miasm' to call that nosologic entity.
Then at a certain moment he found 'psora', of which he said it is a morbid disorder of the vital force, which he also called 'miasm'.
So, energetic as well as nosologic entities are called miasmatic.

NB:
I prefer to use the word miasm for the acute miasm and the three classic miasms of Hahnemann: psora, sycosis and syphilis; when I discuss mixed miasms, the term 'diathesis' will normally be used.

HYPOTHESIS:

The 'chronic' miasms can partly be considered as an inherited amalgam of hundreds of genes that are present in the DNA of every individual. The main protection of the DNA and the wrapping histone proteins is effected by the (incarnated) personal and the inherited ancestral energy. Depending from the lifestyle and the recent miasmatic related infections during the life of the last generations and that of the individual self, these chronic miasms will be more or less active or activated. This specific modulations are more or less influenced by epigenetic mechanisms.

Psora is the basic miasm and the source of every chronic disease and is present in mankind since the beginning, spending its action very largely upon the nervous system and the nerve centres, producing 'functional' disturbances.
Sycosis and syphilis, on the contrary, are acquired miasms since many thousands of years present in mankind, causing pathological tissue changes.

1. Gene / genome related are:

the chronic miasms: probably its miasmatic information is stored in the so called 'junk DNA', where 6% of the DNA is of retro-viral origin. Of high importance can be the repeated sequences in that part of the DNA.

By chronic miasms we understand: psora, sycosis and syphilis; and their clusters: the tubercular and cancerinic diathesis.

Note: Miasms, as Sankaran describes, to differentiate the plants in plant families are very different to the classic traditional miasms. His ten (what he calls) miasms express the way of being, of perceiving the world and of how handling problems.
So they are a kind of reaction types, which are very much like the stages as used in the periodic table of elements.
(see: Homoeopathic Links, vol. 20, p.24 and vol. 22, p.47)

2 Epigenome related are:

the acute miasms and miasmatic related infections

environment factors

dietary sources lifestyle: intake of free radicals; smoking habit; ...

psychological factors /**stress**/ emotions!

These epigenetic imprints can also be transgenerational.

Examples of epigenetics:

a. PSYCHOLOGICAL FACTORS:

- In rats: Caring mothers reduce response to stress for life in their children.

- In humans:

  - Lack of parental care or childhood abuse can contribute to subsequent criminal behaviour .

  - Lack of parental care and parental over-protection ("affectionless control") is a risk factor for depression, adult antisocial personality traits, anxiety disorders, drug use, obsessive-compulsive disorder and attention-deficit disorders.

  Conversely, people who reported high levels of maternal care were found to have high self-esteem, low trait anxiety and less salivary cortisol in response to stress.

  Longitudinal studies demonstrated that mother-child attachment is crucial in shaping the cognitive, emotional and social development of the child.

    Throughout childhood and adolescence, secure children are more self-reliant, self-confident and have more self-esteem. Secure infants also have better emotional regulation, express more positive emotion and respond better to stress.

    Infant disorganized attachment has been associated with the highest risk of developing later psychopathology, including dissociative disorders, aggressive behaviour, conduct disorder and self-abuse.

b. EMOTIONS:

- one of my patient acquired a full diabetes from some anticipating fear concerning his family (the business he founded was now in the hands of his son and his son called him to see him urgently concerning a very important matter without wanting to say him what the matter was about. So he thought the worst scenario and developed immediately a full diabetes, which never disappeared since.

- fear in the mother during pregnancy (husband told her he would leave her) made that the foetus of 32 weeks old stops moving.

At the moment the gynaecologist administered Opium XMK she saw under echo monitoring immediately the foetus move again.

c. STRESS:

- Some shrubs in Africa developed thorns in a few decades as survive and defence mechanism against mammals that eat their leaves.

- Influence of stress and health-behaviour on miRNA expression.

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Mol Med Report. 2010 May-Jun;3(3):455-7. doi: 10.3892/mmr_00000279.

Abstract: Psychological stress is correlated with and may even cause DNA damage, which contributes to the etiology of various diseases. Recent studies point to the role of micro-RNA (miRNA), small molecules that regulate gene expression, in health and disease. This study investigated the relationship between transient stress and two cancer-related miRNAs, and determined whether health-behaviour moderated these relationships. Using a pre-post design, 37 German students completed measures on health-behaviour and perceived stress, the latter after a study break (low stress) and after an exam (high stress). On both occasions, students underwent blood tests to determine the expression of let-7b and miR-21, two miRNAs recently found to be related to cancer. The students reported significantly higher stress after the exam than in the study break period. The levels of let-7b and miR-21 expression significantly declined from low- to high-stress periods. Importantly, baseline health-behaviour interacted with time in relation to miR-21, such that the expression of this marker decreased only in students with inadequate health-behaviour, while it did not change in students with adequate health-behaviour. This is the first study showing that brief academic stress can alter the expression of two cancer-related miRNA molecules, and that health-behaviour may moderate these effects for miR-21.

The influence of STRESS in homeopathy.

From the epigenetic point of view we can also talk of a "Stress diathesis":

(see: DEGROOTE, F., Dromen vanuit homeopathisch perspectief, p. 70 – 74.)

Physiological repercussions of stress:

A few decades ago, Dr Hans Selye (Prague) from the University of Montreal demonstrated that the body reacts physiologically in exactly the same way in response to all stressful situations.

He distinguishes 3 stages:

Stage 1 and 2, being the alarm phase and the repel phase, are directed by the sympathetic nervous system. In stage 3, being the recovery phase, the parasympathetic nervous system comes into action on the other hand.

Under the influence of stress the adrenal glands produce hormones that are responsible for a 'fight or escape' reaction. During permanent stress, our body consumes all vitamins, minerals en nutrients to repair the damage caused by stress. The ***sympathetic nervous system*** *is activated during which the adrenal medulla gives off more adrenaline.*

Further on, the heartbeat and the contraction force of the heart increases, the amount of white blood cells is raised to fight eventual infections, the amount of red blood cells rises so that more oxygen can be brought into the cells, in the liver and the muscles glucose is put free, the pancreas gives off insulin so that the over-measure of glucose is taken up into the cells, the trachea becomes wider and the breathing accelerates,…

After the condition of stress, the parasympathetic nervous system comes into action to restore all body functions so that energy levels come back into balance.

But, when the damage caused by stress cannot be repaired sufficiently, the body enters step by step into an exhaustion phase, which is energetic as well as physical and mental.

During this phase an adrenal insufficiency develops. The adrenal glands shrink and are filled with dead damaged cells, so that adrenaline (from the adrenal medulla), but also cortisone and other hormones (from the adrenal cortex) cannot be made anymore. The protective and healing power of the adrenal glands diminishes.

The typical image of adrenal exhaustion is a low energy level in the morning. The energy level rises gradually reaching its maximum level in the evening, causing difficulty falling asleep. Eventually a deep sleep is most often achieved, but one does not feel well rested when waking up.

Energetic repercussion:

<u>The adrenal glands are our energetic battery</u>.

As well as this, the adrenal glands are the seat of our ancestral energy.

Since all hereditary meridians distribute their energy from the kidney-zone, we understand why negative stress weakens the kidney energy and consequently also the ancestral energy which is linked to it. So we get a kind of miasmatic repercussion on our energetic system.

In consequence, the adrenal insufficiency as a result of stress can be regarded **as a kind of miasmatic layer**!

Gradual evolution of stress in symptomatology:

Fatigue, pain in the back at the height of the dorsal-lumbar transition (= exhausted adrenal glands), (allergy); Different psycho-somatic complaints; **Forgetfulness** and problems of concentration; Fear, **hyperventilation**, **sleeplessness**; Chronic tiredness, burn-out, **asthenia**; **Fibromyalgia** ; **Chronic fatigue syndrome (CFS).**

The great homoeopathic stress-remedies are:

- Magnesium muriaticum: Stress acts as a 'miasm' in our society and prevents, in a Mag-m. case, the 'real' developing of the individual personality.

- Other stress-remedies are:

Ambra grisea, Belladonna, Berberis, Carbo animalis, Carbo vegetabilis, Carcinosinum, Drosera, Eleuteroccoccus senticosus, Homarus gammarus, Ignatia amara, Lachesis (and also other snakes), all magnesiums (and sepecially **Mag-m**.), Natrum muriaticum, Opium, Phoshorus, Platina, Pulsatilla, Rumex crispus, Suprarenalis glandula, ...

and remedies which belong to the rubric: Generalities / Mind: weakness in worn-out businessmen: Clematis, Coca, Cocculus indicus, Kali phosphoricum, Lycopodium, Nux vomica, Phosphoricum acidum, Proteus, Zincum phosphoricum.

Because of the high impact of negative stress, we can even set that **stress represents a new diathesis** that encloses the individual fundamental or constitutional (remedy) as a supplementary layer.

It may happen that the mental-emotional nucleus of the fundamental remedy is recognizable from out of the anamnesis, but the patient doesn't react to this remedy as long as the appropriate stress-remedy has not been given sufficiently.

So we sometimes find a difference in dreams at a first consultation when it concerns dreams dating from a long time ago (dreams belonging to the fundamental or constitutional remedy) and more recent dreams (dreams belonging to the actual stress-remedy).

DISCUSSION OF THE MAIN HOMEOPATHIC MIASMS :

PSORA:

The psoric miasm or the internal itch-disease is considered by Hahnemann as the basic miasm, the source of every chronic disease, which expresses itself in a skin-eruption. The basic disorder is an inability to assimilate, which results in **deficiency syndromes** and stagnation. This imbalance of health manifests itself through 'functional' disturbances, hypersensitivity of all sorts and neurotic expressions.
Hahnemann considered psora as a contagious disease causing first physical disturbances and having in the second place also mental manifestations.
Nowadays we know that psora is not a contagious disease, as mentioned above, but a kind of susceptibility (Kent) which is inherent and stored in our genes. The life time of our chromosomes is determined by the number of cell duplications and the length of their telomeres[*note].
This susceptibility is related to the immune system on which depends the majority of illnesses.

*Note: The role of the telomeres:

Telomeres are structures which are situated at the end of the chromosomes and consist of DNA-sequences which do not code for proteins. Of all the DNA there is 2% coding and 98% is non-coding. Only the coding DNA is responsible for the production of the necessary cell proteins. The coding DNA of a chromosome cannot be copied totally from the first cell division on without the help of the telomeres. From the first fission, the cell has already too less chromosome material and would die if not the telomeres would give them a part of their structure. So the telomeres become shorter each time the cell divides and are by it the marker of the cell ageing.

SYCOSIS & SYPHILIS:

In the course of the evolution a lot of retroviral DNA* is included in the human genome. So 6% retroviral DNA is present in the part of the DNA that normally not codes for proteins. The fact that it is incorporated in the genome must have its deeper reasons.

> *: Retroviruses derive their name from proceeding retrograde (= backward). They reverse the process of DNA transcribing into messenger RNA by using an enzyme, reverse transcriptase, that converts viral RNA into a DNA copy that becomes part of the host cell's DNA.

Probably there the link with the homeopathic miasm doctrine has to be found.

Cell biology: This retroviral DNA normally is silenced by methylation. If something changes that methylation, then that retroviral DNA can become active, being cut from its original position and 'jump' to another place in the genome. Those sequences are called 'jumping retrotransposon'.

When such a jumping retrotransposon lands next to the promotor of a gene, then it can make run riot the transcription of this gene.

(Transposons are little pieces of DNA which move freely and which can incorporate themselves in the DNA of the genome because they can produce the transposase enzyme which splits the genome DNA before incorporation.)

Example: So such a jumping retrotransposon is discovered as cause of the activation of the synovial cells in rheumatoid arthritis by which there is a faster degeneration of bone and cartilage.

This is a sycotic reaction pattern!

From the research work of Luc Montagnier we know that even short sequences of DNA (e.g. a single gene) can emit electro-magnetic signals (EMS).
Also similar EMS were detected from some exogenous retroviruses (HIV, FeLV), hepatitis viruses (HBV, HCV), and influenza A (in vitro cultures).
(DNA waves and water: L. Montagnier, J. Aissa, E. Del Giudice, C. Lavallee, A., Tedeschi, and G. Vitiello, 2010)

From the energetic point of view, the stability of genome and its chromatin proteins is influenced by an **ancestral energetic layer** which can be kept stable by the use of nosodes which are directly related to the ancestral energy.

SYCOSIS:

> The miasm 'Sycosis' is not synonymous with the disease 'Gonorrhoea'. Sycosis is the whole energetic disturbance, of which the disease Gonorrhoea is but a material part.
> Nowadays we assume that the miasm Sycosis is a broad susceptibility, which has its origin in inherited gonorrhoea, that reacts energetically also on a lot of actual similar diseases.

Now the sycotic miasm differs from the miasm known in Hahnemann's time.

In Hahnemann's time the sycotic miasm was rare. But one century later J.H. Allen estimates that 80 % of the population of Chicago, especially in men, are sycotic in some degree, either from the acquired form or from hereditary transmission (A-I, p. 70).

The primary manifestation of the sycotic miasm is of bacterial character. We know by the investigations of Hahnemann and Allen that the contagion can occur in two ways (with some extrapolations*):
- or through sexual intercourse (and saliva*)
- or through vertical transmission: by hereditary transmission (and also by transmission via the mother through the placental barrier, contamination during labour and breast feeding*).

Now a lot of bacteria and viruses, which correspond to those ways of contamination, cause the same disease symptoms as found in the sycotic miasm.
The main of them are **Chlamydia bacterium** (= DNA)and the **Human Papilloma Virus (HPV)(= double-stranded circular DNA virus)**, especially the types 6 and 11 which cause condylomata and genital warts, but also other viral and bacterial agents can be considered, as for example the Cytomegalovirus (CMV) (= double-stranded DNA virus), the Epstein-Barr Virus (EBV) (= linear double-stranded DNA virus), the Herpes Virus (HSV-2) (= double-stranded DNA virus) and Mycoplasma genitalium* & Ureaplasma urealyticum (= DNA)*.
(Of a lot of those microbes the DNA is found inside the host cell, and the DNA of some of them even becomes integrated into the host cellular DNA, like in a lot of HPV infections. The others influence in an epigenetic way the expression of the underlying miasm.)
So, the expression of the primary gonococcus infection changed nowadays into a wide branch of similar infections as mentioned above.

So, the expression of the primary gonococc infection changed nowadays into a wide branch of similar infections as mentioned above.
These infections cause an intensified expression of the hidden (sycotic) miasm by epigenetic mechanisms*note in not only the contaminated person but also transgenerational in the probands.

> Note: Epigenetic modifications encompass a great variety of mechanisms acting not just only at transcription and translation but at post-transcription and translation **with even rewriting of genomic DNA**.

SYPHILIS:

Now the syphilitic miasm differs from the miasm known in Hahnemann's time.

> The miasm 'Syphilis' is not synonymous with the disease 'syphilis'. Syphilis is the whole energetic disturbance, of which the disease Syphilis is but a material part.
> Nowadays we know that the miasm Syphilis is a broad susceptibility, which has its origin in inherited syphilis, that reacts energetically also on a lot of actual similar diseases.

The primary manifestation of the syphilitic miasm is of bacterial character.
We know by the investigations of Hahnemann and Allen that the contagion can occur in two ways (with some extrapolations*):
- or through sexual intercourse (and saliva*)
- or through vertical transmission: by hereditary transmission (and also by transmission via the mother through the placental barrier, contamination during labor and breast feeding*).

Now a lot of bacteria and viruses, which correspond to those ways of contamination, cause the same disease symptoms as found in the syphilitic miasm.
The main of them is the **AIDS virus** (= RNA retrovirus), but also other viral and bacterial agents can be considered, as among others the Human Papilloma Virus (HPV), especially the types 16 and 18 (hrHPV = high risk human papilloma virus) (= double-stranded circular DNA virus) which can cause cervical dysplasia and adenocarcinoma, the Hepatitis B Virus (HBV)(= partly double-stranded DNA virus), the Hepatitis C Virus (HCV) (single-stranded RNA genome) and the Human T-Cell Leukaemia Virus (HTLV-1 and HTLV-2)(= RNA retroviruses).
(HTLV-1 and HTLV-2 can cause cancer. They are essentially exogenously acquired to the fact that its pro viral DNA is found only in malignant lymphoma cells. They mainly affect T CD4 cells and are able to induce malignant transformations in them. They cause adult T Cell Leukaemia – Lymphoma.)

So, the expression of the primary treponema pallidum infection changed nowadays into a wide branch of similar infections as mentioned above.
These infections cause an intensified expression of the hidden (syphilitic) miasm by epigenetic mechanisms*note in not only the contaminated person but also transgenerational in the probands.

> Note: Epigenetic modifications encompass a great variety of mechanisms acting not just only at transcription and translation but at post-transcription and translation **with even rewriting of genomic DNA.**

The tubercular diathesis (miasm) = Psoric + Syphilitic miasm.

The cancer diathesis (miasm) = Psoric + Sycotic + Syphilitic miasm.

NOTE: The development of cancer is dependent on:

1. the **degree of methylation** of the DNA and acetylation of the histones:

Nowadays scientists according to epigenetics have found that hypermethylation of DNA is a key element in the development of cancer.
So, an aberrant methylation of the DNA plays a primordial role in the cancerogenesis. Disorders of the DNA methylation occur in about 65% of the cancers. A disturbed methylation leads to a inactivation of the tumor suppressor genes and to the development of cancer.
A lot of tumours contain histones which are excessively or insufficiently acetylated.

2. **miRNA's.** MicroRNA (miRNA) is a form of non-coding RNA of about 20 to 25 nucleotides, which is complementary to a sequence part of the mRNA. By forming there a double helix the translation of the mRNA is blocked.

So miRNA is a part of the epigenetic memory because it regulates (by activating or suppressing) the expression of the genes.

Now there are already found about 500 miRNA that are involved in the genesis of cancer (which is actually number is only a fraction of real number).

3. Transposons

4. Aging (accelerated by intake of oxidants/free radicals, exposure to sun, radiation, ...)

Oxidant by-products of normal metabolism cause extensive damage to DNA, protein, and lipid. This damage (the same as that produced by radiation) is a major contributor to aging and to degenerative diseases of aging such as cancer, cardiovascular disease, immune-system decline, brain dysfunction, and cataracts.

*Proceedings from the National Academy of Science of the United States of America, 1993 Sep 1; 90(17): 7915-22.

5. There have to be also a lot of quantum physics elements (signal translation) in the genesis of cancer (because cancer cannot be resolved by only Newtonian thinking).

ISOPATHIC NOSODES (MONERA and YEASTS):

Monera are bacteria and viruses.
Yeasts belong to the kingdom of the fungi.

It is proved that slumbering viruses and bacteria play a role in a large number of chronic diseases and syndromes as fibromyalgia, chronic fatigue syndrome, multiple sclerosis, cancer, warts, allergy, emotional disturbances and various neurological disorders.

So the idea rises that there must be epigenetic links as result of the resonance between some specific miasms and some specific acute infections, and this not only in a linear (biochemical) way but also by transmission of an energetic signal (quantum physics).

In homeopathy the reverse healing action can be effectuated by the administration of the correct isopathic nosode.

There are two kind of miasmatic remedies:

- NOSODES (classic nosodes, bowel nosodes and some isopathic nosodes as aids, brucel. and chlam.).

These remedies act directly into the core of the miasm.

- Some plant / mineral / animal remedies.

Those remedies do not affect the core of the miasm however they tone down the action of some specific miasm.

Ex.: Mercurius that acts on the syphilitic miasm.

Thuja that acts on the sycotic miasm.

The effect of the administration of such a miasmatic remedy is transgenerational because e.g. the remedy is silencing as well in an energetic way as via epigenetic mechanisms the expression of the beneath miasmatic genome and/or epigenome.

The way it acts on the genome is by influencing the action of the repeated tandems in the non-coding DNA in their activating or silencing of some gene expression.

Mostly, if a classic nosode is indicated, it will be in an intermediate way, for example when the well selected remedies failed. Then the prescription of the nosode usually is based on the family and personal history. The predominance of nosodal symptoms in babies and infants is usually striking. This means that nosodes are more indicated in childhood as compared to adolescence. Nosodal energy acts especially upon some extra-channels, vessels or meridians, which transport inheritable forces, the ancestral energy. These forces are bound with the chromosomes and they come from our ancestors. So, it is not something particular to the individual but common to a large number of his relatives (epigenetics!). The ancestral energy determines the great part our immune system and life force and it also explains the tendencies to several illnesses of so called congenital weakness.

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