

PRELIMINARY
INVESTIGATION
INTO AN
EXPERIMENTAL
HOMEOPATHIC
APPLICATION
OF
ETNA LAVA

Contents

- Location of sample sites
- Treatment of samples
- Substances traced in research samples
- Organisation of the experiment
- Composition of test population
- Participating researchers
- Procedure
- The experimental / trial
- Presentation of significant data / symptoms
- Statistical analysis of trial data
- Bibliography

Samples were taken from different areas of the
volcanic strata of Mount Etna,
whose typology may be broadly summarised as follows

| | |
|----------------------------------|----------------------|
| Base sub-alkaline lava rock | 700,000 – 500,000 BC |
| Basic-alkaline lava rock | 200,000 – 80,000 BC |
| Definite alkaline rock features | 80,000 – 30,000 BC |
| Still definite alkaline features | 30,000 BC – 2000 AD |

Location of samples collected

| | |
|------------|--|
| Sample n°1 | Below “Grande Albergo Etna” – lava flow of 1780 |
| Sample n°2 | South-east of Paternò, village of Astrel |
| Sample n°3 | South of Belpasso |
| Sample n°4 | Between Misterbianco and Belpasso, lava flow of 1669 |

The samples were collected with the collaboration of
Dr Diego Puglisi,
Department of Geological Science, University of Catania

Treatment of samples

Each sample underwent the following treatment:

- **Crushing** by manual press – less than 2mm in size.
- **Reduction** in granulometry using Herzog disc grinder – dimension of fine clay.
- **Quartation.**

After removal of an equal portion of each sample, the resulting powders were ***mixed.***

The objective in the final mixing of the blend from the four samples was to obtain a homogenous powder that would contain all the chemical properties of the four source samples.

The resulting powder was subjected to chemical analysis using inductively coupled plasma (ICP) mass spectrometry, provided by ACTLABS Activation Laboratories Ltd., Toronto, Canada.

Substances traced in research samples

| Weight as % of major oxides | | Trace elements in ppm | |
|---|------|-----------------------|------------------|
| SiO ₂ | 49% | Zr | Sr |
| Al ₂ O ₂ | 17% | Hf | Au ^{**} |
| Fe ₂ O ₃ [*] | 10% | Ta | As |
| CaO | 9% | La | Ba |
| MgO | 5% | Ce | Be |
| Na ₂ O | 4% | Nd | Br |
| K ₂ O | 2% | Sm | Rb |
| TiO ₂ | 1% | Eu | Cs |
| P ₂ O ₅ | 0.6% | Tb | Sb |
| MnO | 0.2% | Yb | Sc |
| L.O.I | 0.1% | Lu | V |
| Total | 98% | Y | Cr |
| | | Th | Co |
| | | U | |

(*) Fe₂O₃ expresses the total value of Fe (Fe₂O₃ + FeO)

(**) Value calculated in ppb

Organisation of experimental investigation into homeopathic application of Etna lava

Experimental procedure followed by Professor Matera: randomised double blind versus placebo/control, on 60 hypothetical healthy subjects selected from Catania and Palermo.

Composition of test population

- Male and female subjects
- Between the ages of 20 and 55 inclusive
- In apparent sound physical and mental health
- Had not received either allopathic or homeopathic medication / treatment for at least three months prior to trial
- Cigarette consumption limited to no more than three a day
- Non-drinkers or no habitual intake of alcoholic beverages other than one or two glasses of wine a day
- Coffee / tea consumption: maximum two cups a day

NB: Any variations in these requirements were duly noted

Participating researchers

MONITOR:

Professor Mario Matera
(Chair of Pharmacology, University of Catania)

RESEARCH CO-ORDINATOR:

Dr Gaetano Arena
(Association "L'albero della vita", Catania)

INVESTIGATORS:

Dr Maria Francesca Spada
Dr Gaetano Arena
Dr Riccardo Nucifora

PHARMACEUTICAL SUPPORT:

IMO, Milan

SPONSOR:

IMO, Milan

Procedure

- Division of the test subject population into 2 groups, A and B, with a ratio of 1:1 for the double blind trial.

- A further, random, subdivision of the two test populations, with a ratio of 1:1, for the crossover experiment. (Only Professor Matera knew the identities of these sub-groups. Only at the end of the trial were the identities of the verum and placebo/control groups, as well as the lists of the A1, B1, A2 and B2 populations, made known.)

- Preparation of the ETNA LAVA mixture in a 30CH concentration, in accordance with standard homeopathic pharmacopoeia and with due care and diligence employed by IMO in the preparation process.

- Prescription of a daily dose of 6 granules to be taken in two lots a day, on an empty stomach, one dose upon wakening, the other before going to sleep at night, for 15 days.

- Observation of the test subjects for a further 15 days after the end of the test period.

- Prescription of routine examinations / ECG for some of the test subjects, at the testers' discretion, before the beginning of the experiment.

The experiment

Phase 1

- A **preliminary meeting** specifically for the testers to clarify the aims of the trial, that is, the observation of the subjective symptomatology of symptoms on three levels: physical, emotional, and mental.
- The **observation**, and recording in relative files, of the symptoms observed on the three levels noted above, for at least seven days before the start of the experiment proper. These data to serve as a reference for the symptoms recorded during the experiment.
- The drawing up of a complete **case history** for each tester, conducted using classic homeopathic methodology.
- A classic objective clinical **examination** of each subject.

Phase 2

- The intake for 15 days of the verum and/or placebo preparation (interrupted at the first observation of significant symptoms in at least 2 subjects).
- Constant telephone contact between investigators and testers.
- Due attention given to any traumatic events or situations occurring in the course of the experiment, accidents, quarrels, and so on. (Such attention led to the exclusion of one subject.)

Phase 3

- Observation of the subjects for a further 15 days after the end of the experiment proper.
- Analysis of observation records.
- Final meeting between testers and investigators, with discussion and full analysis of symptoms reported.
- Elaboration of test data.

Presentation of significant data / symptoms

The experimental investigation into the homeopathic application of Etna lava conducted under the supervision of the monitor Professor Mario Matera was carried out in two phases between January 2000 and September 2001.

The division into two distinct phases allowed the investigators to corroborate in the second phase those symptoms observed in the testers during the first phase and to identify any new symptoms.

The first part of the research was conducted using double blind and cross over technique, with 11 control subjects and 11 verum subjects. As the symptoms presented were considered particularly interesting, it was decided to proceed to the second phase of the experiment with 18 other subjects (male and female, who were unaware of which substance they were receiving) using a 30CH dilution, and with two subjects from the first phase who received the substance in a 200CH dilution.

The symptoms observed, throughout the whole of the experiment, and recorded for each organ or apparatus, are outlined below. The following abbreviations are used:

NS = new symptom OS = old symptom CS = changed symptom
TS = treated symptom.

MIND (Grafico 3)

Between the first and tenth day of the experiment, tester n° 11 (Me.-Ca.) and tester n° 14 (Me.-Ni.) presented symptoms of euphoria and nervousness as

though they felt especially excited (during the first three days); on the fourth and fifth days, they experienced feelings of sadness (NS).

For the first six days, tester n° 23 (Pu. Sal.) presented signs of irritability coupled with rage particularly noticeable in the morning (OS). This was followed until the tenth day by a state of serenity coupled with tiredness and difficulty in concentration (the subject had trouble recalling and organising the things to be done during the day).

Tester n° 29 (Sp. Mi.), experienced feelings of anxiety coupled with solitude and sadness, immediately upon taking the preparation and for the following twenty-four hours, as though she felt alone and abandoned; feelings of anxiety for the whole day. The feeling of sadness grew stronger from the second to the third day, coupled with feelings of anger and outbursts of rage with no apparent reason. The tester wrote: "I flared up angrily against my mother in such an impulsive way that I couldn't control myself, raising my voice and using very unseemly language." (NS)

From the second day of the experiment, tester n° 30 (Tu. Ti.), felt intense feelings of apathy, sadness, mental and physical fatigue, coupled with a desire to do nothing and crying fits with no apparent reason (NS). During the fifth day, the tester interrupted the experiment, to begin again after 16 days, with a return of the same symptoms. The tester wrote: "I didn't want to leave the house, I felt isolated, a prisoner of my own sadness, I felt listless and wanted to cry all the time for no real reason, I felt indifferent to my loved ones."

Tester n° 33 (Ar. Ol.) reported having felt, between the third and sixth day, strong sensations of restlessness, agitation, easy loss of self control and intolerance of being contradicted. From the seventh to the tenth day, he

experienced total mental and physical fatigue. “It was really difficult for me to organise work and day to day things. Everything that I was used to doing was somehow heavy, difficult, I couldn’t handle anything either mentally or physically, and I felt like I was on drugs.” The subject stopped taking the preparation and the symptoms continued for a further five days before disappearing (NS).

Tester n° 34 (Ga. Ca.) reported feeling, from the third to the fifth day, less anger than usual and a certain feeling of serenity and peace mind which led her to deal with daily problems in a calm and relaxed manner (NS).

Tester n° 36 (Ca. Le.) wrote that from the first to the fifth day of the experiment (when she stopped taking the preparation), she felt a great sense of security and trust in herself, that she felt stronger and more able to deal with work and every day life (NS). When she ceased taking the preparation, her usual feelings of anxiety, agitation and restlessness returned.

Tester n° 38 (Ar. Ga.), one of the two subjects taking the 200CH dilution, reported that for the first twelve days he felt relaxed, coupled with feelings of calm and inner peace, with a decrease in his usual need for haste. On the fourteenth and fifteenth days he felt tense and angry. “For the first twelve days I felt as if I was under the influence of some mild sedative,” he wrote.

Tester n° 39, the other tester who used the 200CH preparation, reported feeling from the sixth day onwards mental fatigue coupled with pain in his forehead region and all over his head. On the tenth day, the fatigue gave way to a certain confused state of mind and then to a feeling of depression, thereafter he felt the need to cry in order to free himself from a sensation of oppression that

caused him to see everything in a negative light (NS). He ceased taking the preparation.

HEAD: (Grafico 4)

Almost all the testers reported suffering from throbbing headaches.

Tester n° 5 (Ti. Ma.) reported an all over headache that seemed to be centred just above her eyes between her eyebrows (between the first and third days), feelings of vertigo and giddiness as if she were on a high sea. This sensation was present in the morning until 10 am; it then disappeared and returned in the afternoon (NS).

Many testers (n° 7, 23, 27, 30) reported experiencing a headache centred at the front of the head, coupled with a certain confused state of mind.

Tester n° 34 (Ga. Ca.) suffered from a headache which seemed to spread out from her left eye.

The subjects who presented this symptom reported it as occurring in the morning until 10 am, or in the afternoon at around 4 pm.

EYES:

Only four testers reported a burning sensation in the eyes (OS). Tester n° 5 (Ti. Ma.) experienced it around twilight.

NOSE (Grafico 5)

Tester n° 5 (Ti. Ma.) and tester n° 14 (Me. Ni.) reported experiencing the sensation of a heavy cold, as if mucus was draining into their trachea and chest.

Tester n° 15 (Va. Da.) noted a sensation of getting cold and a slight nasal

secretion. Tester n° 16 (Po. Pi.) reported a feeling of getting cold, with a blocked nose. Tester n° 22 (Ar. Ga.) noted the presence of mucus in his nose and throat.

THROAT (Grafico 6)

Some testers experienced a burning sensation, catarrh, tightness of the throat and aphonia to a slight degree, others to a greater extent.

Tester n° 14 (Me. Ni.) reported that on the fourth day he felt a burning sensation in his palate, coupled with an emission of greenish mucus, a burning sensation along his trachea and a dry cough. He ceased taking the preparation. He began again ten days later and the symptoms returned, this time accompanied by the sensation of suffocation, short-windedness, and a fear of suffocation associated with a feeling of panic (NS). The symptoms disappeared completely only six to seven days after he stopped taking the preparation for the second time. Other testers presented these symptoms in a less dramatic form.

Tester n° 20 (Mo. Ge.) complained of pain in her throat, with the presence of mucus, a certain heaviness and burning sensation in her chest. Tester n° 22 (Ar. Ga.) reported hoarseness, as if caused by mucus that was difficult to expel, coupled with a burning sensation, lose of voice in the early part of the day (until 12 noon), chills all over the body, especially in the lumbar region, and slight pains in his chest (CS).

Tester n° 30 (Sp. Mi.) reported nasal congestion as if caused by an allergy, a yellowish-green catarrh and from the third to the seventh day, a progressive lowering of his vocal pitch, as well as shivers along his spine (OS). Tester n° 40 (An.Ri.Ca.) reported a dense mucous secretion, particularly acute in the

morning, a constant need to clear her throat, coughing, hoarseness, a continuous burning sensation of the pharynx which disappeared only 24-36 hours after she had stopped taking the Etna lava 30CH preparation.

From the fifth to the ninth day, tester n° 24 (Ga. Ca.) complained of a sore throat in the evening, with the feeling that she was becoming more and more hoarse and her throat more and more clogged. A few days later she developed a feeling of tightness in her throat, with a cough that was sometimes dry and sometimes full of catarrh.

Half an hour after taking the preparation, tester n° 37 (Sq. Gi.) felt a nasal itch, congestion and slight catarrh in the throat, which disappeared after three days.

Tester n° 39 (Pa. Gi.), one of the two testers taking the preparation in 200CH, wrote that from the sixth day he experienced a progressive lowering of the voice and a slight sore throat. His nose was always dry to the point that he found it difficult to breath.

In general, many testers reported chills and aches in their bones as if they were suffering from the 'flu.

STOMACH (Grafico 7)

Three testers reported feelings of nausea after the midday meal, as well as heartburn. Two testers reported a feeling of pressure on the solar plexus.

ABDOMEN and *RECTUM* (Grafico 8 and 11)

Ten testers presented abdominal swelling, cramps, an increase in constipation or in diarrhoea.

Tester n° 30 (Sp. Mi.) reported that he usually voided his bowels two to three times a day, with rather liquid faeces, but with no pain. After taking the preparation, he voided once a day, with compact faeces (CS).

From the fourth to the ninth day, tester n° 36 (Ca. Le.) reported pain in her lower left side, with stabbing pains, cramps and diarrhoea in the morning upon awakening (NS). These symptoms gradually intensified to the point where she had to stop taking the preparation.

On the third day, tester n° 15 (Sq. Gi.) experienced explosive diarrhoea at 12 noon (he usually suffers from constipation).

FEMALE GENITALS/SEXUAL ORGANS:

Tester n° 7 (Pa. Am.) noted an absence of thirst before her menstrual cycle, a symptom which she had never presented before (NS).

Tester n° 33 (Ar. Ol.) recorded a significant decline in libido (fourth to eighth day) (OS).

Tester n° 11 (Me. Ca.) confirmed the absence of menstrual pain from her first menstrual cycle after the end of the experiment (NS).

GENERAL SYMPTOMS (Grafico 9)

At least twelve testers recorded feelings of weakness or asthenia, and chills with widespread aches in the joints of both upper and lower limbs. Certain subjects presented greater degrees of fatigue and asthenia with no presence of chills, while others presented both sets of symptoms for more than three days.

From the seventh day to the eleventh day, tester n° 18 (Fi. To.) suffered intense weakness for most of the day, manifesting acute sleepiness around 4 pm.

From the tenth to the thirteenth day, tester n° 29 (Ge. Pa.) suffered such a general state of fatigue and weakness, coupled with pain in the lumbar region, that he stopped taking the preparation. The symptoms disappeared after two days.

SLEEP (Grafico 10)

Tester n° 23 (Pu. Sa.), who usually suffered from acute insomnia, reported sleeping peacefully and restfully every night throughout the experiment period (TS).

Eight testers recorded difficulty in falling asleep, nighttime wakefulness and constantly fitful sleep.

Tester n° 36 (Ca. Le.) wrote that from the seventh to the ninth day, at which point she stopped taking the preparation, she was subject to very disturbed sleep and would awake feeling anxious at around three in the morning, finding it very difficult to fall asleep again.

DREAMS:

Two testers, n° 4 (Ga. Ci.) who received the preparation in 30CH and n°38 (Ar. Ga.) who received the preparation in 200CH, both reported dreaming for at least three nights of dark-furred wolves or dogs.

SKIN:

From the seventh to the tenth day, tester n° 43 (Le. Fr.) noted the appearance of eczema on his left leg (NS).

In the first days of the experiment, two testers recorded the presence of burning mouth ulcers on the upper lip and left side of the lower lip.

One of the two testers using the preparation at 200CH (Ar. Ga.), presented an abscess, very painful to the touch, on his left buttock between the sixth and tenth days (OS).

Bibliography (Italian language editions)

1. Hahnemann, S. *Organon dell'arte del guarire*. Edizioni Cemon, Napoli, 1987. Translation of the 6th edition.
2. Hahnemann, S. *Dottrine e trattamento omeopatico delle malattie croniche*. Arte Tipografica, Napoli, 1987.
3. Kent, J.T. *New Remedies*. Day & Co, 1973
4. Kent, J.T. *Lezioni di filosofia omeopatica*. Como, 1991
5. Bradford, T.L. *La nascita dell'omeopatia. Vita e lettere di S. Hahnemann*. Grosseto, 1993.
6. Sherr, J. Yaakov *Le dinamiche e la metodologia della sperimentazione omeopatica*. Edizioni Salus Infirmorum (trans. Dr M.L. Gonella), 2001.