

## REVIEW ARTICLE

**ALSUntangled No. 23: The Rife Machine and retroviruses***The ALSUntangled Group*

In the 1920s and 1930s, Royal Raymond Rife developed special microscopes. Using these he claimed he could visualize living microorganisms, including viruses too small to be seen with any other existing technology, via the color of auras emitted as they vibrated (1). In a 1961 deposition he explained this as follows: “A special risley prism which works on a counter rotation principle selects a portion of the light frequency which illuminates these viruses in their own characteristic chemical colors by emission of coordinative light frequency and the viruses become readily identifiable by the colors revealed on observation.” (2). Several of his microscopes still exist. Their principles and alleged function have never been validated, and they have never been adopted for use.

Rife went on to postulate that the microorganisms he was seeing were involved in human diseases, including cancer (3–6). He invented a machine that he claimed could transmit radio frequency energy into a person and vibrate these microorganisms at a “mortal oscillatory rate”, thereby killing them and improving the disease they were causing (3–6). Rife’s claims were based upon his microscopic evaluations, which again do not appear to be legitimate. The very concept that diseases can be cured by radio frequency energy, originally proposed by Albert Abrams and referred to as ‘radionics’ (7), was later investigated and disproven by the *Scientific American* (7,8). Nonetheless, there remain those who believe in Rife’s work, claim it was suppressed as part of an elaborate conspiracy (9) and continue to sell similar energy-transmitting devices (10–12).

Here, on behalf of PALS who asked about it, we review the potential use of the Rife Machine for ALS.

**Rationale**

Two lines of evidence suggest that a specific type of microorganism, retrovirus, may be involved in ALS. First, the retroviruses HIV (13) and HTLV-1 (14)

can rarely cause ALS-like upper and lower motor neuron diseases. In the former, treatment with anti-retrovirals can arrest or reverse the ALS-like disease (13,15). For this reason, patients who have risk factors for HIV or HTLV-1 are tested to exclude them before a final ALS diagnosis is made. Secondly, serum reverse transcriptase (RT, an enzyme used by retroviruses) is detected in a significantly higher percentage of patients with sporadic ALS compared to healthy controls, even after excluding HIV and HTLV-1 (15). The source of this increased RT has yet to be defined. Some have postulated that it may originate from a human endogenous retrovirus (HERV), a retroviral-like sequence contained within the genome (15). Increased expression of a HERV subtype (HERV-K) has been detected in the serum and brains of patients with ALS (15).

It is not yet clear what specific role endogenous retroviruses like HERV-K might be playing in sporadic ALS. Arguing against a causal role is a small open-label pilot trial, in which 12 retrovirus-positive, HIV-negative patients with ALS were treated with the anti-retroviral agent zidovudine for 2–10 months; while serum creatine kinase (CK) levels improved, no change in clinical course was observed (16). However, this study may have been too small or too short to demonstrate a clinical effect.

In order for the Rife Machine to have a rationale in the treatment of ALS, a number of claims must all be true. The most plausible of these is the interesting possibility that microorganisms (specifically retroviruses) play a role in some patients with ALS. Even if true, however, there is no evidence to suggest that the frequencies Rife claimed to identify are genuine, or that the specific radio frequencies based upon them would kill a retrovirus while leaving host tissue untouched. It is extremely implausible that the low-powered radio frequency Rife machines can have any meaningful biological activity, let alone lethal activity against specific microorganisms.

*Relevant animal data*

There are no published animal data investigating the Rife Machine as a treatment for ALS.

*Relevant human data*

There are no published clinical trials or case reports of the Rife Machine use in PALS. On Patients-LikeMe, only a single PALS has reported trying the Rife Machine (17). No benefits or side-effects were reported.

A Google search using the term ‘Rife for ALS’ identified two additional PALS who reported trying it. The first (18) was initially diagnosed with a ‘muscle virus’ and then later was diagnosed with ALS in an emergency room. They reportedly had significant pain and ‘kidney failure’ as part of their disease, and eventually became wheelchair bound. With the help of a chiropractor and ‘vitamins’ they improved and were able to walk again. After eight years, their chiropractor discovered mycoplasma as the cause of their ALS, started Rife treatments, and two days later they were “free from the illness”. Unfortunately there is no contact information for this person, so ALSUntangled was unable to verify the diagnosis or response to treatment. This would certainly be an odd case for several reasons, including the diagnosis in an emergency room, the degree of pain, the kidney failure, the mycoplasma and the dramatic initial improvement with chiropractic and vitamin therapy. It is also difficult to understand how ALS could completely reverse after two days of any treatment; even if the causal agent was removed, it should take months or years to reinnervate weak muscles. The second PALS (19) reportedly started using a Rife Machine from JW Labs in 1999. There were no follow-up reports, and unfortunately they died in 2005 (20).

ALSUntangled spoke with John Wright of JW Labs, manufacturer of one type of Rife Machine. He recalled three PALS using his Rife Machine, with “improved symptoms”. No more specific information was remembered, and no objective outcome measures were available for review (21).

**Costs and potential side-effects**

The cost of a Rife Machine from JW Labs is \$1695. In terms of side-effects, Wright stated that in his experience these are rare. He recalled some non-ALS patients experiencing “shingles and stones coming unblocked” (21).

**Conclusions**

It is possible, although currently unsettled, that ALS in some individuals may be due to a retrovirus. Even

if true, however, Rife’s microscope technology, his identification of specific frequencies for pathogens, and the ability of Rife radio frequency machines to kill pathogens, are all unproven and highly implausible. We have identified no verified cases of ALS improving on any objective outcome measure with the Rife Machine. At this time ALSUntangled does not support the use of the Rife Machine for ALS.

The ALSUntangled Group currently consists of the following members:

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Note: this paper represents a consensus of those weighing in. The opinions expressed in this paper are not necessarily shared by every investigator in this group.

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