Wikipedia offers several articles relating to the subject of water, which do not cohere well. For example, memory of water, water clusters, Emilio del Giudice, Giuliano Preparata, and Jacques Benveniste all have separate wiki entries.

The article on Jacques Benveniste is a simple hit piece. It closely resembles a longer work by rexresearch on the same topic. [1] For all their length, in addition to rehashing Maddox's witch hunt, they provide only two definitively negative attempts to duplicate Benveniste's results: Ovelgonne et al. found no effect of extreme dilutions,[2] and in a study of digital biology for DARPA, Jonas, et al found no replicable effects from digital signals.[3] Although both label the Hirst et al study a negative, Jonas labels it inconclusive: the researchers did not follow Benvineste's protocol, and their data supported Benveneste's claim more than the researchers acknowledged in their conclusion [4].

Although the wiki critique on Benveniste acknowledges immediately that water has many anomalous characteristics, it refuses to consider that "memory" of some sort, might be one of them.[5]

Some of the material presented to discredit may actually be interpreted to support homeopathy. Consider the wiki critique comments of one prominent researcher, Madeleine Ennis, who began the research as a skeptic, but concluded in the year 2004 time frame that the "results compel me to suspend my disbelief and start searching for rational explanations for our findings." [6] In 2010, a review of the attempts to replicate the efficacy of homeopathic dilutions was published in the journal *Homeopathy*.[7] In it, Ennis concludes,

"The methods are poorly standardized between laboratories – although the same is true for conventional studies ... Certainly there appears to be some evidence for an effect – albeit small in some cases … How much of the effect is due to artifacts remains to be investigated." [8]

Although successfully insulting Benveniste, and dropping numerous innuendos, the wiki critique has failed to make much of a case against Benveniste, homeopathy, or digital biology.

The wiki article on water clusters notes that on-going research is important because it may help explain many anomalous water characteristics "So little is understood about water clusters in bulk water that it is considered one of the unsolved problems in chemistry".

But Exclusion zone water/interfacial water is physically different from bulk water, including the fact that some of this interfacial water is liquid crystalline

http://en.wikipedia.org/wiki/Water_cluster

According to a wiki article, "water memory" defies conventional scientific understanding and is not accepted by the scientific community. Water memory in this article is defined as "the purported ability of water to retain a memory of substances previously dissolved in it even after an arbitrary number of serial dilutions." This article repeats most of what appears in the wiki article on Benveniste.

https://en.wikipedia.org/wiki/Water_memory

Both Emilio del Giudice and Giuliano Preparata are described in wiki articles as respected award winning physicists. Del Giudice specialized in quantum field theory and its relationship with the physics of collective, coherent processes, while Preparata dedicated a great part of his scientific activity to high energy physics, giving fundamental contributions to the construction of the standard model. The Del Giudice article provides detailed bibliographic references for 82 articles authored or co-authored by Del Giudice, including a number co-authored with Preparita on superradiance, coherence, and related topics.

https://en.wikipedia.org/wiki/Giuliano_Preparata https://en.wikipedia.org/wiki/Emilio_Del_Giudice

https://en.wikipedia.org/wiki/Jacques_Benveniste

Professor Chaplin defines memory of water as the extent to which past events may influence the future behavior or properties of aqueous solutions. He notes a number of mechanisms by which this 'memory' may come about. Simply adding a solute, which results in a slow movement of the aqueous solution towards equilibrium is one such mechanism. Other mechanisms are more interesting: these include but are not limited to restructuring after exposure to infrared radiation persists for a day. Changes to the structure of water are reported to last for weeks following exposure to a resonant RIC (inductance, resistance, capacitance) electrical circuits.

Water does store and transmit information concerning solutes, by means of its hydrogen bonded network. Although individual molecules of water cannot retain memory of past hydrogen bonding, clusters of water molecules can. Water cluster size and lifetime depends on their physical and chemical environment. Clusters can continue forever, although with constant changing of the constituent water molecules

Chaplin notes that many scientists who deny the memory of water do not produce data showing no memory, but rather produce arguments why it cannot have memory, such as the ease with which hydrogen bonds between water molecules may be broken. What such arguments fail to acknowledge is that large populations of water molecules may retain behavior even if individual

molecules are constantly changing.[9] Often the final argument against the memory of water is “I don’t believe it”, a very unscientific argument. [10]

Martin Chaplin notes Jacques Benveniste’s work in digital biology, and although he considers the idea unlikely, warns that ignoring any evidence for it is scientifically unsound. He also notes that as with the basic memory of water concept, experimental confirmation of the phenomena may not confirm the proposed mechanism. [11]

CISCOP and JREF’s restriction of scientific fact to the existing canonical model of science seriously impedes the development of new scientific knowledge.

---

[1] http://www.rexresearch.com/benveniste/benveniste.htm
[2] https://en.wikipedia.org/wiki/Jacques_Benveniste
[3] *Can specific biological signals be digitized?*
Wayne B. Jonas, et al The FASEB J. 20(1): 23-28
Also https://en.wikipedia.org/wiki/Jacques_Benveniste

[4] *Can specific biological signals be digitized?*
Wayne B. Jonas, et al The FASEB J. 20(1): 23-28

[5] http://en.wikipedia.org/wiki/Water_cluster vs https://en.wikipedia.org/wiki/Water_memory

[6] https://en.wikipedia.org/wiki/Jacques_Benveniste
[7] Entitled *Basophil models of homeopathy: a sceptical view,*
[8] https://en.wikipedia.org/wiki/Jacques_Benveniste
[9] For example, water waves may retain a shape and travel long distances even though individual molecules are constantly changing position. It is also argued that water clusters cannot retain their organization longer than a fraction of a second. Evidence for this is generally based on computer modeling, NMR and diffraction data. Computer modeling is inadequate for predicting long term effects for a number of reasons, including short simulation time and poor fidelity. NMR and diffraction are incapable of detecting mobile structures where components may change, which is true in virtually all water samples.
The Memory of Water: an overview
Professor Martin Chaplin,

Homeopathy (2007) 96, 143–150

[10] *The Memory of Water: an overview*
Professor Martin Chaplin,
Homeopathy (2007) 96, 143–150

[11]*The Memory of Water: an overview*

Professor Martin Chaplin,

Homeopathy (2007) 96, 143–150