

# ESPS Peer-review Report

**Name of Journal:** World Journal of Biological Chemistry

**ESPS Manuscript NO:** 10274

**Title:** Life is More Than a Computer Running DNA Software

**Reviewer code:** 00032726

**Science editor:** Xiu-Xia Song

**Date sent for review:** 2014-03-23 18:10

**Date reviewed:** 2014-04-08 22:40

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)		BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

# COMMENTS TO AUTHORS

In a recent interview with Craig Venter, a leading expert in the field of synthetic biology, he is elaborating the Digital Biological Converter (DBC) attached to a computer that receives DNA sequences over the internet to synthesize DNA and is convinced that 'life is a DNA software system'. In this editorial, authors firstly queried the rationality of Craig Venter's conclusions about the nature of Life and the coherence of his view with empirical knowledge. Secondly, from the perspective of epigenetics, authors considered that the DBC could focus only on the 1.5% coding sequences and not explain all essential processes of life which were organized by non-coding RNAs. Finally, they thought that DNA organized in chromatin was far more complex than the human-made 'software system' and biocommunication did not function mechanistically and was not algorithm dependent, that is, it was not possible to create digital life by human-made software in the future. Generally, this editorial is a powerful supplement for Craig Venter's theory of the nature of life and helpful for readers to comprehensively understand the synthetic biology. And I recommend it to be published.

**ESPS Peer-review Report**
**Name of Journal:** World Journal of Biological Chemistry

**ESPS Manuscript NO:** 10274

**Title:** Life is More Than a Computer Running DNA Software

**Reviewer code:** 00504224

**Science editor:** Xiu-Xia Song

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)		BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

**COMMENTS TO AUTHORS**

I enjoyed reading this. Having not read the article in the Gaurdian, the only caveat, I would have is thta perhaps Craig Venter is referring to this Universal Recipient Cell in terms of a bacterial cell, for which the nuances of some forms of epigenetics may not have as much relevance. I am minded of Jacques Monod's statement "Once we understand the biology of Escherichia coli, we will understand the biology of an elephant." However, in this regard I do agree with the sentiments of the authors, in that the complexity and issues of epigenetics that there will be more to the Digital Biological Converter (DBC) than a simple add synthetic DNA to make the end product. While perhaps somewhat provocative, I belive that this sort of article should be presented to the wider scientific community

# ESPS Peer-review Report

**Name of Journal:** World Journal of Biological Chemistry

**ESPS Manuscript NO:** 10274

**Title:** Life is More Than a Computer Running DNA Software

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**Science editor:** Xiu-Xia Song

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)		BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

# COMMENTS TO AUTHORS

In this editorial, the authors queried Craig Venter's concepts of 'life is a DNA software system', and all living things are reducible to DNA sequences. Venter is elaborating the Digital Biological Converter (DBC) attached to a computer that receives DNA sequences over the internet to synthesize DNA. The authors gave reasons to believe DNA can store a multitude of further meanings hidden under the superficial grammar of nucleic acid sequences as the variety of epigenetic markings. 1. The authors affirmed Venter's further technological breakthroughs in the near future. But Venter's conclusions about the nature of Life are not justified. 2. Venter's concept relies on software system computation models. However, these models cannot explain all essential processes of life such as replication, transcription, translation, repair and immune defence, all of which are organized by an abundance of small and large RNAs. 3. The authors believed that Venter's concepts will not be possible to create digital life in the future. In all, this editorial is a professional comments on Craig Venter's conclusions of the nature of life.