Journal of Genetics and Genetic Engineering
Volume 4, Issue 1, 2020, PP 27-31
ISSN 2639-1953

Regeneration of the Dissected Genetic Code

W. B. Bozegha*

Numeration Science Literature, Development Research Project, Foubiri Sabagreia, Kolga, Bayelsa State, Nigeria

***Corresponding Author:** W. B. Bozegha, Numeration Science Literature, Development Research Project, Foubiri Sabagreia, Kolga, Bayelsa State, Nigeria, Email: wbbozegha@yahoo.com*

ABSTRACT

Statement of the Problem

By the dissected genetic code, it is meant the true genetic code of 24 quadruplet codons, that as a captured specimen, underwent the gory experience of dissection in a single file. All the codons with all their belongings of RNA four bases A,U,G,C (Adenine, Uracil, Guanine, Cytosine) per codon got emptied consequently. The genetic code content of 96 base elements in four base types of A,U,G,C in a sequence of 24 codons is now cast up into eight dendritic mounds; four on each side of its axis and two of each base type under designations of purines and pyrimidines respectively because of dissection effected by dichotomization. Nevertheless, arrangement the embodiment of all things and circumstances volunteers to regenerate the dissected (divested) genetic code i.e. offering to restore the 24 permutation quadruplet codons.

Methodology and Theoretical Orientation

One quadruplet codon AGCU in the form of a square is sighted in two locations of the debris of the dissected (dichotomized) genetic code. This find is a boon to the regeneration mission by reason of the potency of the quadruplet codon whereby anyone of the 24 permutation quadruplet codons can be used as input set in the combinatorial input/output multiplicative replication system for generating the genetic code characterized by 4 from 4 permutation of RNA four bases, now that the square kinematics view mixing technique is available for use.

Findings

A genetic code of unique sequence of 24 permutation quadruplet codons is produced with the vestigial AGCU codons as input set and as the seed of life for the 24 quadruplet genetic code.

Conclusion and Significance

The genetic code derived from the vestigial AGCU codon is a worthy alternative of the dissected genetic code, in that given a common derivation technique the genetic code owes its uniqueness of sequence to the uniqueness of its input set sequence so that no two different quadruplet codons can produce a genetic code of identical sequence. This of course is in furtherance of the necessity for protein type proliferation and diversification.

Keywords: *Vestigial, Codon Potency, Input Set, Output Sequence.*

INTRODUCTION

AGCU square, a vestigial quadruplet codon, is spotted in three locations of the dissected genetic code: two upon eight dendritic mounds, and one airborne and cabled. This find is a boon to the mission of regenerating the fabric of 24 quadruplet codons for the dissected genetic code by a numerationist who is armed with the technique of computing permutations of 4 from 4. It is a matter of waiting briefly to see a brand new genetic code of 24 permutation quadruplet codons!

MATERIALS AND METHODS

Materials

The dissected genetic code with vestigial AGCU codon square in three locations as per Diagram 1, furnished here with.

Methods

With the available sample of the dissected genetic code ref. Diagram 1, bearing AGCU codon as a square in three locations, which can be deployed as input set in the combinatorial

input/output multiplicative replication system using the Square Kinematics View Mixing Technique as shown in Figure 1.

A square of convenient size is drawn and the four bases A,G,C,U of the dissected genetic code are loaded at the four corners at one base per corner as shown in Figure 1 in clockwise direction for sequence.

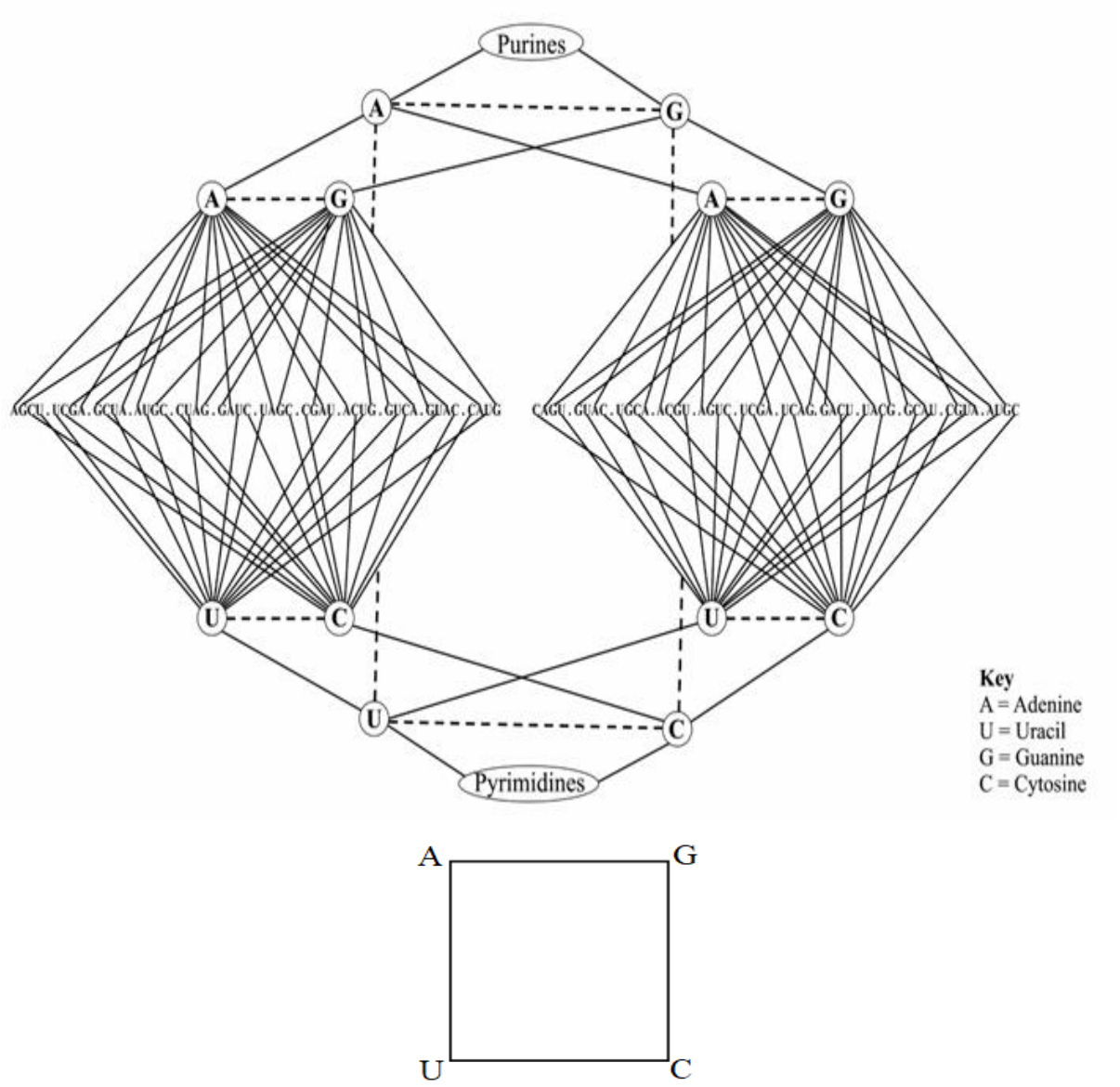

Fig1. *AGCU square as retrieved from the dissected genetic code as input set.*

The AGCU loaded square is deployed in three ways as depicted in Figure 2, namely:

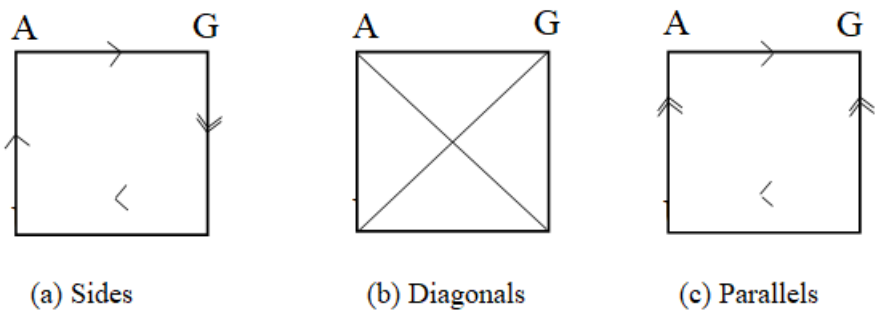

Chart 1: Genetic code output computation by Square Kinematics View Mixing Technique.

Fig2. *Three deployments of AGCU loaded square in terms of (a), (b), (c)*

Regeneration of the Dissected Genetic Code

(a) Deployment of sides, ref. Fig. 2 (a)

Viewing along sides from A clockwise AGCU Line 1

Fro UCGA Line 2

Viewing along sides From G clockwise GCUA Line 3

Fro AUCG Line 4

Viewing along sides From C clockwise CUAG Line 5

Fro GAUC Line 6

Viewing along sides From U clockwise UAGC Line 7

Fro CGAU Line 3

(b) Deployment of diagonals, ref. Fig. 2 (b)

View along diagonals From A clockwise ACUG Line 9

Fro GUCA Line 10

View along diagonals From G clockwise GUAC Line 11

Fro CAUG Line 12

View along diagonals From C clockwise CAGU Line 13

Fro UGAC Line 14

View along diagonals From U clockwise UGCA Line 15

Fro ACGU Line 16

(c) Development of parallels, ref. Fig. 2 (c)

Viewing the parallels AG//UC Horizontals AGUC Line 17

Fro CUGA Line 18

Viewing the parallels UC//AG Horizontals UCAG Line 19

Fro GACU Line 20

Viewing the parallels UA//CG Verticals UACG Line 21

Fro GCAU Line 22

Viewing the parallels CG//UA Verticals CGUA Line 23

Fro AUGC Line 24

Summary of valid products: Lines 1 - 24 = 24 permutation quadruplets

Factorial ${}_4P_4 = 4! = 4x3x2x1 = 24$ permutation quadruplets

Production = Prediction = 24

Hence 24 permutation quadruplet genetic code produced from vestigial AGCU codon of dissected genetic code, Diagram 1.

RESULTS

The result, a 24 quadruplet genetic code derived from the vestigial AGCU codon of the dissected genetic code in Chart 1 is presented in (i) block form in Table 1 and (ii) in linear form in Figure 3.

Table1. *24-quadruplet genetic code derived from vestigial AGCU codon of the dissected genetic code.*

S/N	Codons	Source Ref. Chart 1	Remarks
1	AGCU	Line 1	24 quadruplet genetic code offspring of vestigial AGCU codon in lateral alignment of codons, hence in block form.
2	UCGA	Line 2	
3	GCUA	Line 3	

4	AUCG	Line 4	
5	CUAG	Line 5	
6	GAUC	Line 6	
7	UAGC	Line 7	
8	CGAU	Line 8	
9	ACUG	Line 9	
10	GUCA	Line 10	
11	GUAC	Line 11	
12	CAUG	Line 12	
13	CAGU	Line 13	
14	UGAC	Line 14	
15	UGCA	Line 15	
16	ACGU	Line 16	
17	AGUC	Line 17	
18	UCGA	Line 18	
19	UCAG	Line 19	
20	GACU	Line 20	
21	UACG	Line 21	
22	GCAU	Line 22	
23	CGUA	Line 23	
24	AUGC	Line 24	

(ii)Figure 3: 24 quadruplets genetic code offspring of the vestigial AGCU codon in linear alignment as codons lie end to end in a sequence.

AGCU.UCGA.GCUA.AUGC.CUAG.GAUC.UAGC.CGAU.ACUG.GUCA.GUAC.

CAUG.CAGU.UGAC.UGCA.ACGU.AGUC.UCGA.UCAG.GACU.UACG.GCAU.

CGUA.AUGC.

Discussion

Of the 24 permutation quadruplet codons each made up of the RNA four bases A,U,G,C constitute the true genetic code, the codon AGCU alone has featured as vestige or remnant of the dissected genetic code by monopolizing the occupation of as many as the three locations of the dissected genetic code ref. Diagram 1 in the form of a sequence AGCU. By reason of codon potency each of the 24 permutation quadruplet codons can be used as input set in the production of a unique genetic code sequence of 24 quadruplets. In effect 1 quadruplet codon produces 1 unique genetic code sequence by 1 technique. So as a matter of proportion 24 quadruplet codons of a genetic code can produce 24 unique genetic codes by 1 technique. Therefore, for the available 12 techniques the 24 quadruplet codons would produce 24 x 12 unique genetic codes, which is equal to 288 unique genetic codes. It portends that when all these 288 unique genetic codes are dissected, it is only AGCU codon would still occupy the three locations of each dissected genetic code in the form of a square loaded with AGCU as per our example on hand. Whereupon the AGCU codon is still the only vestige or remnant of all 288 dissected unique genetic codes, and by it alone a common genetic code can be raised in the stead of all 288 dissected genetic codes irrespective of their inherent diversity. So the AGCU codon plays the role of the seed of life for the genetic code in the case of the gory experience of the dissection.

Conclusion and Significance

All 288 possible genetic code sequences have a common hope of regeneration by the seed codon AGCU in case of dissection and resultant disembodiment. As such the vestigial AGCU codon is the prince of the genetic code codons. It anyway owes this exalted position to its special connection with Chargaff rule which states that number of Adenines (A) is equal to the number of Uracils (U) and the number of Guanines (G) is equal the number of Cytosines (C) and the Purines A+U = Pyrimidines G+C.

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Citation: *W. B. Bozegha, "Regeneration of the Dissected Genetic Code", Journal of Genetics and Genetic Engineering, 4(1), 2020, pp. 27-31.*