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From Rising Bubble to RNA/DNA and Bacteria

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In this study we have focused on the movement of rising bubbles in a salty water body. Experiments reviled that free buoyancy movement of bubbles forces displacement of ions, located on the outer side of the bubble wall curvatures. During the short moment of bubble passage, all ions in the vicinity of rising bubble, are separated into anions that are gathered on the bubble upper half sphere and cations that slip along the bottom concave half-sphere of a bubble and develop a sub-bubble vortex. The principle of ions separation bases on the differences in displacement resistance. In this way, relatively heavier and larger, thus more resistant to displacement anions are gathered on the rising bubble upper half sphere, while smaller and lighter cations are assembled on the bottom half sphere and within the sub-bubble vortex. The acceleration of motion generates antiparallel rotary of bi-ionic domains, what implies that anions rotate in clockwise (CW) and cationic in counter-clockwise (CCW) direction. Then, both rotational systems may undergo splicing and extreme condensing by bi-pirouette narrowing of rotary. It is suggested that such double helix motion of bi-ionic domains creates RNA/DNA molecules. Finally, when the bubble reaches the water surface it burst and the preprocessed RNA/DNA matter is ejected into the droplets. Since that stage, droplet is suspended in positively charged troposphere, thus the cationic domain is located in the droplet center, whilst negative ions are attracted to configure the outer areola. According to above, the present study implies that the rising bubbles in salty waters may incept synergistic processing of matter resulting in its rotational/spherical organization that led to assembly of RNA/DNA molecules and bacteria cells.