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STRUGGLING MULTI-STRESS RESISTANT *MYCOPLASMA PNEUMONIAE* WITH BUILT-IN POTENCY, TOLERANCE BEHAVIOR TO ANTIBIOTICS, AND ULTRAVIOLET IRRADIATION *. B.

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ABSTRACT

Biofilm ecosystems and the emergence of Mycoplasma pneumoniae strains with specific characteristics in certain regions and food sources. The presence of stress hardening and quorum sensing behavior within an enclosed ecosystem of the biofilm indicates a complex adaptation mechanism. In this case, the Mycoplasma pneumoniae strains encountered were epigenetically host-specific but had drifted adapted characteristics. These strains were found in dairy products from specific sectors in Baghdad, namely Abu-Ghraib, Al-Sadrya, and Al-Fudhaliyah, during seasonal episodes from January to June 2021. The presence of Mycoplasma pneumoniae in the food chain suggests contamination, which was deemed unacceptable. Within the biofilm ecosystem, a resident population consisting of Streptococci, Mycoplasma, and M. pneumoniae was identified, with the potential to form a potentiation wax barrier. The concerning aspect of these M. pneumoniae isolates was their multidrug resistance (MDR) phenotype, specifically to antibiotics with ESβL activity. Additionally, these strains displayed an Ultra Violet Tolerance (UVT) behavior, making them resistant to UV light exposure. Out of the eighteen isolates tested, sixteen (88.88%) were resistant to all selected antibiotics, with only moderate susceptibility to Norfloxacin, Aztreonam, and Azithromycin. The presence of UVT sublethal resuscitated clones indicated colony phase variation. Please note that this response is a summary of the information provided and may not capture all details accurately. It's important to consult the scientific literature or relevant experts for precise information on this topic.

Key Words: Mycoplasma pneumoniae, Antibiotics Resistance, Ultraviolet Irradiation Tolerance, Dairy Products.

INTRODUCTION

Resurrection day is coming soon augmented throughout hidden, unclassified and unknown portals for the entrance and residence of new emergent, stress-adapted entities in food chain ecosystems. Due to the upgraded and built-in enclosed environment of electromagnetic clouds of biofilm with integrated genes sharing strategies cascaded by stress hardening and quorum sensing

behavior among dangerous and biohazard pathogens ending with the development of new sophisticated versatile adapted strains with well-equipped, broad-spectrum genetic material (**Cheng *et al*., 2019; Waheed et al., 2021; Chen *et al*., 2021; Li et al., 2021**). This is in addition to the emergence and revival of prehistoric creatures hiding under the ice, especially in the Siberian region, due to climate change via Harvard project. Such new emergent struggling was the experience prediction of multi-stress adaptation phenomenon of the nosocomial human semiconservative pathogen *Mycoplasma pneumoniae* with phase or phenotype variation and transforming under stress adaptation from host-specific phase to an adaptive versatile phase resident on the food chain with unknown survival and revival mechanisms inside the dairy chain in Baghdad to become "Host Specific but Adapted (HSA)" (**Myers *et al*., 2017; Waheed et al., 2021**).

Stress adapted *M. pneumoniae* in association with an *ESKAPE* series of multidrug resistance forbidden chain, especially *Acinetobacter baumannii,* represents the most common predisposing factors associated with respiratory viral distress especially *corona* or Covid-19 pandemic syndrome. Stress adaptation cascaded by stress hardening extends to multi-stress tolerance and cross protection against multidrug antibiotics, heat-cold tolerance, acid-salt tolerance, and even ultraviolet tolerance behavior in forbidden new or developed entities due to quorum sensing and integrated genes sharing stratigies within the resident matrix of biofilm (**Hammad et., 2022**; **Waheed et al., 2021**; **Aqib et al., 2018**; **Li et al., 2021**). Biofilms are communities of microorganisms that are encased in polymeric matrix and grow attached to biotic or abiotic surfaces. Bacteria grow, build, and arrange in complex multicellular structures termed biofilms. Biofilm formation is commonly considered to occur in five main stages: reversible attachment to a surface, irreversible matrix grows, microcolony formation, biofilm maturation, and detachment or dispersal of bacteria which may then colonize new areas (**Davey and O'Toole, 2000; Crouzet *et al*., 2014; Muhammad *et al*., 2020; Ciofu *et al*., 2022; Dutt *et al*., 2022; Trubenova *et al*., 2022**). Tolerance to the resistance of ultra violet irradiation disinfection was developed as a forbidden behavior in multidrug resistant pathogens (**Pullerits *et al*., 2020; Yin *et al*., 2021; Li et al., 2021; Zannier *et al*., 2022**).

Our mission was to investigate the probability of human host-specific and food-adapted denominator *Mycoplasma pneumoniae* to resist antibiotics and tolerate ultraviolet irradiation regime to forbidden biofilm as an emergent struggling multistress entity.

METHODOLOGY

Recovery Scheme

Present in detail in part **A** of these built-in series assignments.

Conservative Biofilm Construction

A built-in dual drive pathways were dependent on pattern recognition of augmented five-stages biofilm or electromagnetic polysaccharide clouds of slime, in which a gold standard microtiter or tissue culture plate assay for direct assessment of slime bounded mucous and a verified Congo Red medium for indirect assessment of phenotypic Plasmid dependent twisters of

slime equipped potency. Built-in sensitivity and Specifically Pattern equivocally Slime Virulence Index was documented as a verified mean log of both interconnected built-in growth pattern techniques represented by generation time and log curve primordial built-in design. Qualitative and Quantitavely assessment throughout a MTP (TCP) verified the technique in which a modified double strengthened TSBYE$_{76}$ was primed by a fresh McFarland active log dependent culture (CFU.ml^{-4-5}) on a large negatively charged concave well enrolled rectangular plate as described by Christensen *et al*. (1985). Alternatively, modified Congo red agar (**Freeman *et al*., 1989**) was dependent on detection of biofilm-producing phenotypes cascaded with the prediction of plasmid realizing pairs of built-in phenotypes cascaded via clones. Li et al., 2021 verified *Mycoplasma* dependent Biofilm augmentation. An overnight *Mycoplasma* culture grown in dsTSBYE$_{76}$ at 37 °C was transferred and diluted (titrated or standardized) in a microtiter plate as (0.5) ml virtually logged 4-5 McFarland to five ml freshly prepared dsTSBYE$_{76}$ inoculated into each well. Each isolate was tested in triplicate. Consequently, visualized wells with dsTSBYE$_{76}$ unaccompanied were posted as control negative vs control positive human primed strains. The plates were incubated for 48 h at 37 °C in order to construction authorization of visible clear biofilm adhesive poly-mucoid structures, layers, and dots augmented inside the periphery or rims and in the bottom of the charged wells. Furthermore, the culture was removed and the plates were washed three times with sensitive phosphate-buffered saline to remove non-adherent cells and dried in an inverted position.

Adherent biofilm was fixed with 2 % sodium acetate for five minutes and was stained with double modified 20 % biofilm crystal violet and 20 % biofilm safranin for (15-30) minutes depending on the secretory power for each clone, sensitivity, and specificity for each dye. Then, the unbound stain was removed and the wells were washed three times with PBS. Plates were settled (2-3) hours for dryness, and then stained layers and dots of biofilm in the bottom and around the internal rims of the wells were photographed, measured, and scored according to the degree of formation, type of stain and type of isolate. Obvious results revealed after a few hours of av a day after complete dryness of the induced biofilm. Optical density (OD) of the stained adherent biofilm can be achieved by using micro-ELISA auto reader at wavelength (OD $_{570\text{-}600}$) nm or real-time impedance-based cell analyzer, biosensors, fluorescent- or scanning electron microscopy. Cut-off values for biofilm production can be calculated according to verified methods (**Stepanovic *et al*., 2007; Gutiearrez *et al*., 2016; Larimer *et al*., 2016; Hashem *et al*., 2017; Kirmusaoglu, 2019**). Freeman *et al*., 1989, have described an alternative method of screening biofilm formation; which requires the use of a specially prepared solid medium. A modification was done by replacing BHI agar with double-strengthened dsTSBYE$_{76}$ (10 g Tryptone Soya Agar + 1 g Yeast Extract \ 100 ml d. w.) supplemented with 5% sucrose (5 gm \ 100 ml) and Congo red (10 gm \ L) for better outcomes. Congo red added to media directly or prepared as a concentrated aqueous solution and autoclaved at 121©C for 15 minutes, separately from other medium constituents, then added when the agar had cooled to 55©C. Don't autoclave media just boiling (Critical step). Plates were inoculated and incubated for 24 to 48 hr. at 37©C. Positive result was indicated by a plasmid dependent twister growth pattern of augmented black dark colonies with a dry crystalline

consistency. Weak slime producers usually remained pink, although occasional darkening at the centers of colonies was observed. A darkening of the colonies with the absence of a dry crystalline colonial morphology indicated an intermediate result. The experiment was performed in triplicate and repeated three times.

Mycoplasma Antibiotics Susceptibility Pattern

Built-in quorum sensing trusted platform modules overtoned via a cascaded chain of multi-stress hardening genetically hidden sophisticated bionetworks augmented inside a denominator lineage, shifting an emergent disaster to the end point of recalcitrant view. Antimicrobial susceptibility testing (AST) of microbial isolates is a common and important technique in most clinical laboratories. The results of these tests are used for selection of the most appropriate antimicrobial agent(s) for treatment with infectious organisms. Until the 1950s, laboratories were lacking in methodologies and equipment for the accurate determination of *in vitro* responses of organisms to antimicrobial agents. Bauer *et al* (1966) began the development of standardized methods for antimicrobial susceptibility testing using a disc diffusion system. However, the susceptibility results may not always correlate with the patient's response to therapy. The response of an infected patient to antimicrobial agent(s) is a complex interrelationship of host responses, drug dynamics, and microbial activity. Deciphered in vitro tolerant-resistant and even persister pattern does not equivocally or semiconservative biostatical module for the trueness of action potential pattern of that antibiotic *in vivo* to work with natural defense barriers against in vitro resistant denominator. Antimicrobial susceptibility tests are either quantitative or qualitative. Minimum Inhibitory Concentration (MIC) determination is a Quantitative method. Determining MIC using a conventional broth dilution method is a tedious and time-consuming process. Hence, Gradient diffusion susceptibility testing method is accepted widely and is in routine use for a long time (**Bauer *et al*., 1966; Lalitha, 2004; Jorgensen and Turnidge, 2007; Hudzicki, 2009; Jorgensen and Ferraro, 2009; Abed and Jarallah, 2019; CLSI, 2022**).

Proper selection of antibiotics for treatment depends on the right diagnostic gesture in which antibiotics susceptibility test (AST) confirms these guidelines. Increased resistance problems and the emergence of new multidrug pathogens that transferred to the food chain especially in Iraqi environment play a critical tool for the hygienic community and economic strategy for the production and trading of safe food and customer satisfaction (**Kanaan, 2013; Sayed-Ahmed et al., 2020**). In clinical practice, the most frequently prescribed antibiotics are based on general guidelines and knowledge about sensitivity. Because susceptibility can vary even within a species (between and within some strains being more resistant than others are), antibiotic susceptibility testing (AST) is usually carried out to determine which antibiotics will be most successful in treating a bacterial infection *in vivo*. A semiquantitative way based on diffusion (Kirby-Bauer scheme); small discs containing different antibiotics or impregnated paper discs, are dropped in different zones of the culture on an agar plate, which is a nutrient-rich environment in which bacteria can grow. The antibiotic will diffuse in the area surrounding each tablet, and a disc of bacterial lysis will become visible. Since the concentration of the antibiotic was the highest at

the center, and the lowest at the edge of this zone, the diameter is suggestive for the Minimum Inhibitory Concentration, or MIC (conversion of the diameter in millimeters to MIC, in µg.ml-1, is based on known linear regression curves). Based on the authorized supervisor experience and instructions of National Committee of Clinical Laboratory standards (NCCLS), formerly Clinical Laboratory Standards institute (CLSI, 2022) guidelines followed in this account of the Kirby-Bauer disc diffusion method (Bauer, 1966) study the sensitivity of isolates to selected and grouped antibiotics (Liogitchen® LTD., Italy): A dose-dependent ecomaps gradient concentrated discs distributed as Penicillin (P, 10 IU), Erythromycin (E, 15µ), Norfloxacin (NOR, 10µ), Tetracycline (TE 30 µ), Clarithromycin (CLR 15µ), Azithromycin (AZM 15µ) and Aztreonam (ATM 30µ) were dependent for this enrollment.

Ultra-Violet Irradiation Susceptibility Pattern

Orchestrated multi-stress behavior was recognized in multi-drug resistant isolates of *M. pneumoniae* throughout cascaded and sophisticated built-in epigenetic tolerance, drift and genetic resistance shift quorum sensing interconnected mechanisms. An *in vitro* UV light irradiation susceptibility experimental model was initiated to check up the resistance pattern of multidrug resistant isolates of *M. pneumoniae* recovered from dairy chain and human origin. Semiconservative UV-light irradiation disinfection model inside a biosafety hood cabinet was dependent on this torment (Etemadifara *et al*., 2016). The radiation irradiation experimental project was enrolled in Zoonose Unit in which a selected multidrug resistant phenotypes of *M. pneumoniae* were freshly enriched and boosted with dsTSBYE$_{76}$ overnight at 37 ©C, then titrated and standardized with MacFarland opacity tubes throughout counting series of droplet and roll-pour plate techniques to be dose dependent curve of five logs 10^5 CFU.ml-1 for each isolate. A biosafety cabinet supported via 15-W mercury vapor 254-nm germicidal lamp with total emitted pooled adjusted dose-dependent radiation beam 25 J/cm2. Freshly cultured plates on dsTSAYE$_{76}$ and methylene blue fortified PPLO agar were exposed to wave lengths at approximately fifty cm distance (critical checkpoint plates were opened and not covered due to UV light beam down't penetrate covers). According to the previous researches in the field of radiology, UV light kill and acts as a bactericidal decontamination regime with this range of wavelength in a specified period of time not exceeding twenty minutes. Control positive inoculated not irradiated cultures and control negative irradiated not inoculated cultured plates were enrolled in this verified achievement. Primordial triplicates for each iconic culture stone were exposed to UV for twenty- and sixty-minute interval in accordance with supervisor vision. The intensity of radiation was designed for flooding approximately an area of fifteen ft2 under hood. Irradiated cultures were covered with their covers inside s hood then incubated at 37 ©C for 24 hours. Radiation susceptibility indices for selected isolates were compared with standard zone of inhibition of erythromycin as a control parameter in accordance with CLSI instructions and standard tables of antibiotics.

Biostatistical Analysis Experimental Pattern

Built-in primordial statistical design dependent software of Statistical Package for the Social Sciences (SPSS, version 29, 2022), including t-test and Chi-square to scan significance variations among data. According to the null hypothesis, *M. pneumoniae* is predicted to be not encountered in dairy series in accordance to the predominant denominator in cases of human origin such as respiratory problems associated with specific cases of Covid-19. Complete randomized experimental design with observed and expected modules of *Mycoplasma* lineage was enrolled and tested by statistical in order to verify significance differences among denominators, sample brands, geographically scanned zones and in related and specified episodes (time and period intervals) in comparison to *Mycoplasma* ecosystem. Rejection of the null hypothesis with acceptance of alternative concept philosophy revenue association of abnormally adapted *M. pneumoniae* in the food chain ecosystem. When the differences between and within two or more variants means exceeding the calculated values of Chi-square Lsd, then they may be significant but not always it's a true parameter in bacteriology as Jay *et. al*. recommended (2005).

RESULTSS and DISCUSSION

The genGori phenomenon of host-specific, epigenetically adapted and drifted forbidden ancestor denominator *M. pneumoniae* within food chain ecosystems cascaded to humen as an emergent struggling behavior not encountered else. Stress adaptation cascaded by stress hardening between and within forbidden adapted isolates of *M. pneumoniae* harboring checkerboard multi-stress strategies present in Baghdad ecosystem throughout the dairy chain signify a dangerous emergent hazards in our lifestyle. Genetically modified or induced clones, specified enclosed ecosystem of targeting electromagnetic charged biofilm environment, throughout conjugating plasmid bridges, dangerous integrating forbidden lysogenic entities (transduction prophage), transformation with forbidden residual environmental DNA or even sophisticated genes regulating proteins throughout exposure to sublethal stressors causing triggering shifting from low virulent and infrequent pathogens to upgraded entities of highly virulent clones that tolerate mixed and even not exposed stress stimuli with abnormally adapted and emergent diffusion rate or logs exceeding those found normally in food series. Such forbidden struggling was encountered in food chain in Baghdad ecosystem with other foodborne zoonotic and transmissible pathogens and their toxins (**El-Etriby, 2016; Yassin et al., 2021; Sayed-Ahmed et al ., 2020; Seiffein and Ali et al., 2021; Ghasemi et al., 2010; Salawudeen et al., 2023; Pareek and Jadhav, 2020; Hammad et al., 2022; CEBECİ, 2023; Waheed et al., 2021; Aqib et al., 2018; Li et al., 2021**). Forbidden Resident Multi Stress Phenomenon's to Antibiotics (MDR ESβL) cascaded by Ultra Violet Tolerance behavior (UVT) encountered in most isolates of *M. pneumoniae*. Sixteen isolates were resistant to all selected antibiotics out of eighteen (88.88 %) except some moderate susceptibility to Norfloxacin, Aztreonam, and Azithromycin. All these recovered MDR strains were tolerated exposing to UV light (UVT) as an emergent forbidden biohazard, especially those recovered from thick sour yogurt and fresh soft cheese resident in Al-Sadrya within a temperate climate (generation time and growth pattern). Colony phase variation displayed and configured in UVT sub-lethal resuscitated clones.

Slime producers were segregated according to the type and degree of biofilm by microtitre plate assay and phenotypically by plasmid dependent dark twisters and variables with red to white colonies presented on the surface of verified Congo red agar. All human segregate ancestors recovered from Covid-19 patient workers in scanned geographical sectors were strongly potentiated via both systems. DNA linked and plasmid associated twisters were detected in scanned dairy brands from verified topic sectors with variable interconnected outcomes. Double enriched TSBYE$_{76}$ units verify the biofilm throughout slimy mucoid aggregates inside and in the bottom of synthetic chemostat units as well as during taking a loop from colonies with slimy threads. Integrated quantities, records, and dimensions of blue-red configured circles and dots inside the cupules of negatively charged microtiter plates specify the degree of virulence index in verified isolates. Biofilm indices of the recovered isolates segregated them into a durable plasmid twister groups including series entities recovered from humen encountered in all sectors, from raw milk in Al-Fudhaliyah and Al-Sadrya, from fresh ropy yogur in Abu-Ghraib and Al-Sadrya, from thick sour yogurt in Abu-Ghraib and Al-Fudhaliyah, from fresh soft cheese in Abu-Ghraib and Al-Sadrya, and from brined soft cheese in Al-Sadrya and Al-Fudhaliyah. Inside the same isolate, ecosystem recovered from the same brand and sector, we present variable progeny with sophisticated sub-phenotypes or the same phenotype with different behaviors owing DNA and plasmid twisters, strong and red to pink slow producers to white to none slime producers. Downstream figure illustrates and deciphers outcomes. Presentation of data with cross tables and figures deciphered and illustrated in cascaded downstream.

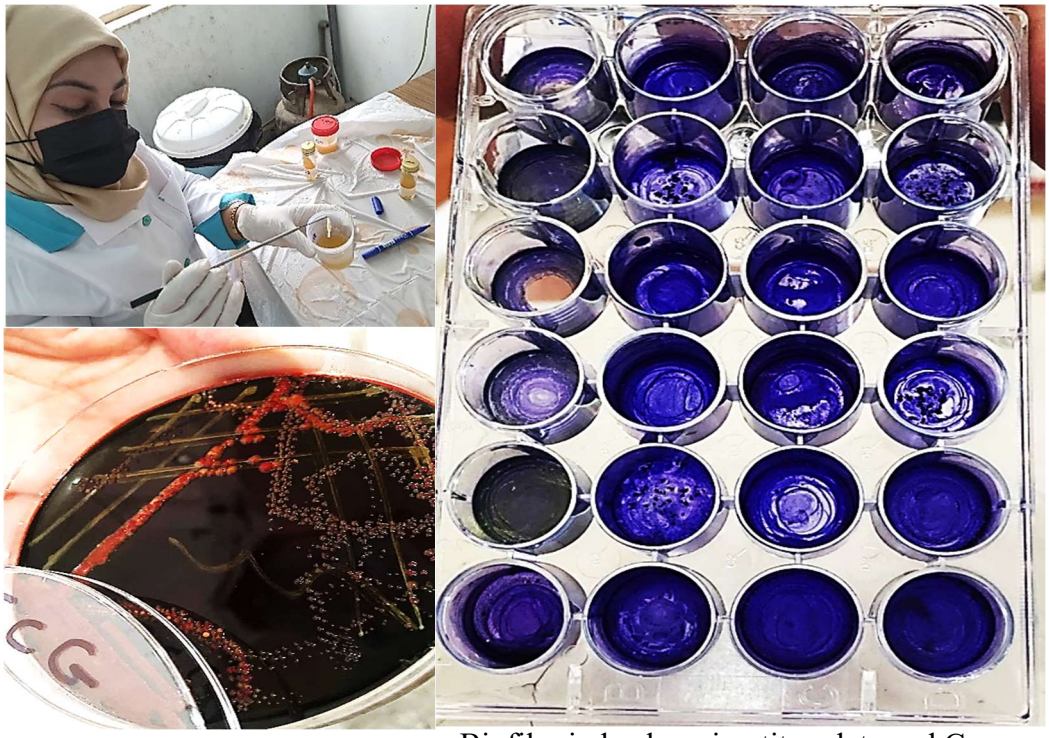
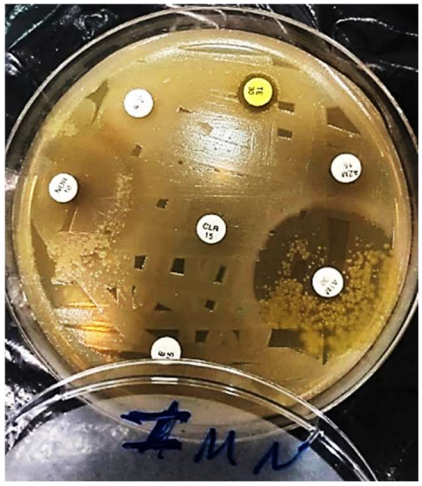


Figure 1. Biofilm index by microtiter plate and Congo red index.

Table 1. Pooled susceptibility of cross-tabulated *M. pneumoniae* to selected antibiotics.

Antibiotics	Susceptible %	Resistant %
Penicillin	None ^{Db}	16 (100) ^{Aa}
Erythromycin	2 (12.5) ^{Cb}	14 (87.5) ^{Aa}
Norfloxacin	8 (50) ^{Ba}	8 (50) ^{Ba}
Tetracycline	1 (6.25) ^{Cb}	15 (93.75) ^{Aa}
Clarithromycin	1 (6.25) ^{Cb}	15 (93.75) ^{Aa}
Azithromycin	2 (12.5) ^{Cb}	14 (87.5) ^{Aa}
Aztreonam	11 (68.75) ^{Aa}	5 (31.25) ^{Cb}
Total	25 (22.321) ^{b}	87 (77.678) ^{a}



A,B,C,D: Cross-tabulated vertical significant differences among selected antibiotics for recovered isolates at level (P≤0.05).

a,b: Cross-tabulated horizontal significant differences among recovered isolates for target antibiotics at level (P≤0.05).

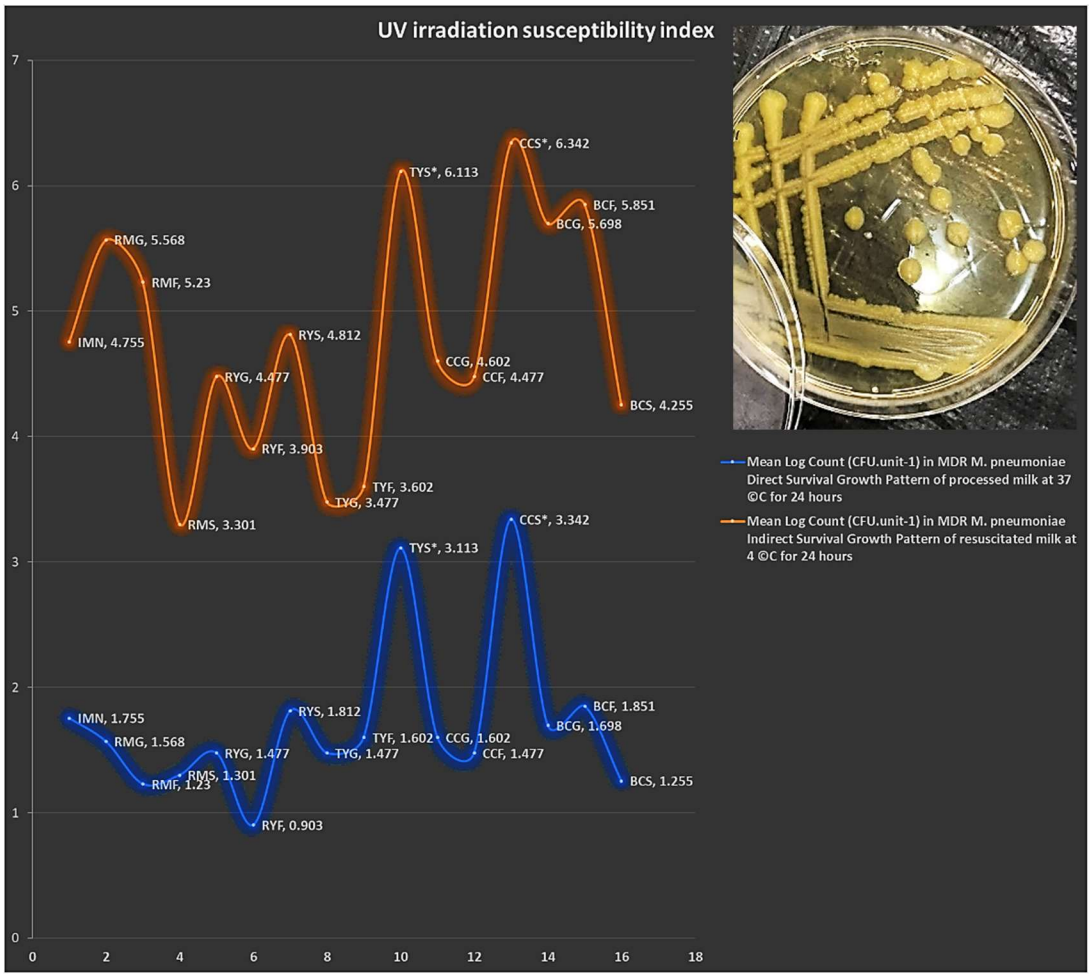


Figure 2. Ultra Violet Susceptibility Pattern of MDR *M. pneumoniae*.

Evolution of new adapted strains of *M. pneumoniae* in the food chain was an emergent special topic or issue for those intellectual believers in which they rely on previously cascaded works. Our environment in Baghdad city can conserve as a reservoir for these new evolved forbidden entities in which other new invaders from built-in cascaded researches in this vital torment were encountered in Baghdad (from milk, meat and eggs with their derivatives) like multi-stress resistant *Listeria monocytogenes* (**El-Etriby, 2016**), Methicillin resistant *Staphylococcus aureus* (ESβL MRSA) in dairies (**Sayed-Ahmed et al., 2020; Aqib et al., 2018**), multidrug resistant Alginate *Pseudomonas aeruginosa* (**Seiffein and Ali et al., 2021**), Multi stress tolerant *Yersinia enterocolitica*, Extended spectrum Carbapenemase resistant *Klebsiella pneumoniae* (ESβL KPC NMD) (**Pareek and Jadhav, 2020**), Vancomycin resistant *Streptococcus faecalis* and *faecium* (VRE) (**Hammad et al., 2022; AL-YAIS, 2019**), Azoles resistant *Candida albicans* (ARCA) and now *M. pneumoniae* denominator that in the past not encountered in the food chain.

Therefore, and due to the experience sensing behavior of the supervisor with verified procedures, we follow a reason to make the mission impossible possible for those playmakers in which face-off facts about either the epigenetic temporarily changing environment surrounding

genes of the targeted focus (forbidden drift tolerance) or sequel changing to permanent multi-stress genetic struggling (forbidden shift resistance). All these predicted and sensed scenarios results from cascaded wars, uncontrolled importation of foods and packages, feeble control procedures, poor economic situation, health status of the costumers, lack of hygiene control over the product, in addition to internal conflicts, failure to preserve food properly, entry of very dangerous mutated strains from outside Iraq, and their adaptation to local isolates, which led to their effective genetic and phenotypic transfer and development or evolve into forbidden entities that able to change of their genetic material due to stress hardening and quorum sensing behavior.

Quorum sensing shifted via stress hardening using an evolutionary equipped AI built-in brain-like machines integrated and cascaded by the verified CRISPR-CAS defense barrier in these emergent forbidden entities that triggered to become new multi-stress strain with either epigenetic temporarily drifted tolerance or genetic completely shifted resistance to UV-light irradiation. And what you have gained from knowledge is only a little, and what is hidden is greater in the evolutionary chain of this forbidden ancestorial microbial chain. The results unveiled the presence of well-developed and equipped sensory programed ecosystems within these hybrid strains that act as receptors and receivers for sequential graded non-synaptic stress driven by the hidden genetic armament motives of these heterogeneous genetic adaptors built in versatile phenotypes, which transfer pulsed and impulses with built-in emergent bridges the variable triggers stimulating one stress to another even if they are not exposed to it at all or indirectly crosslinked with the complex intellectual simulation of forbidden entities, such as dropping one of the domino syndrome puzzles or an overlooked chessboard, which leads to the transmission of endurance and built-in and triggered tolerance signals, shadowed by resistance, and then an orderly sequential fall of the rest of the pieces of the matrix, and thus the emergence of these forbidden clones out of nature. The spectrum of electromagnetic radiation includes regions that are useful in food applications. Although some of these technologies were considered seriously by mid-20th century, interest in their use as alternative processing methods increased only recently (**Duan *et al*., 2021; Leon-Felix and Villicana, 2021; Hasan, M. and Ahn, 2022**).

Emerging radiation technologies in food preservation include gamma (γ), x-ray, ultraviolet (UV), microwave, and radio frequencies. Pulsed light and pulsed UV energy are beneficial technologies with great prospects in food applications. The short wavelengths of UV light inactivate microorganisms through alteration of DNA structure. Interaction of UV with DNA results in dimer formation, mainly cyclobutane-pyrimidine dimers, and DNA-protein cross-linking. These alterations interfere with the cell's ability to multiply, and thus lead to microbial demise. Pulsed light includes wavelengths that range from the ultraviolet (UV) to the infrared regions (**Yousef and Juneja, 2003; Begley and Hill, 2015; Koskella and Vos, 2015**). Numerous initiatives have been directed by global health agencies to tackle this issue. Progressing prospectively across the timeline, we are not far from stumbling upon the 'end of the antibiotic era' since the development of AMR has been entitled to an inevitable phenomenon. ESKAPE pathogens (*Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Enterobacter* spp.) derive special attention from any

infection preventionist (IP) due to their ability to persist refractory to antibiotics and the associated financial and morbidity burden. Environmental stresses cascaded by stress hardening, quorum sensing, and biofilm augmentation result in phenotypic shifting and decreasing or reduction in the zones of inhibition recommended for antibiotics susceptibility patterns (**Ebinesh *et al*., 2018; Denissen *et al*., 2022; Jadimurthy *et al*., 2022; Muntean *et al*., 2022**).

In Conclusions: Struggling with biohazard forbidden multistress resistant *Mycoplasma pneumoniae* with built-in potency tolerance cascaded by resistance behaviors to antibiotics and ultraviolet irradiation was evident in Baghdad as mentioned earlier in Seri-A research of this torment.

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