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1	Introduction to Ellynizer -An Advanced Quantum Biological
2	Device for Eliminating Menstrual Problems
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#### 7 Abstract

19

Since the beginning of life on planet earth, among males and females only the females are 8 endowed with the gift of producing new life. But for this huge privilege a woman has to pay the price almost half of her life, puberty to menopause by going through Menstrual Cycle. 10 Menstruation is a natural phenomenon indicating a woman's fertility. Having regular 11 menstrual cycles is a sign that important parts of the female body are working normally. It 12 also prepares the body for pregnancy each month. A cycle is counted from the first day of the 13 first period to the first day of the next period. But problem with Menstruation begins when 14 abnormality in the regular cycle occurs. The normal range of age for the onset of periods is 15 9â??"17 years. Most girls begin puberty at around 10 years of age with an initial phase of 16 accelerated growth and breast development known as breast budding. Shortly after, pubic 17 hair appears, and by 12 years more than 50 per cent of young girls have underarm hair. 18

**Index terms**— menstruation, menstrual cycle, ellynizer, quantum entrainment, quantum biology, hypothalamic-pituitary-ovarian axis, menstrual problems, ovulation, sp

#### 22 Introduction to Ellynizer - An Advanced Quantum Biological Device for Eliminating Menstrual Problems

## <sup>23</sup> 1 Abhijit Naskar

24 Abstract-Since the beginning of life on planet earth, among males and females only the females are endowed with 25 the gift of producing new life. But for this huge privilege a woman has to pay the price almost half of her life, puberty to menopause by going through Menstrual Cycle. Menstruation is a natural phenomenon indicating a 26 27 woman's fertility. Having regular menstrual cycles is a sign that important parts of the female body are working normally. It also prepares the body for pregnancy each month. A cycle is counted from the first day of the 28 first period to the first day of the next period. But problem with Menstruation begins when abnormality in the 29 regular cycle occurs. The normal range of age for the onset of periods is 9-17 years. Most girls begin puberty 30 at around 10 years of age with an initial phase of accelerated growth and breast development known as breast 31 budding. Shortly after, pubic hair appears, and by 12 years more than 50 per cent of young girls have underarm 32 hair. By the age of 12 years, 50 per cent have menstruated. The peak growth spurt in girls occurs about a 33 year before menstruation begins. Most young women do not settle down to regular ovulatory cycles until two to 34 35 three years after starting their periods. The first day of each cycle is designated as the first day of menstruation. 36 Ovulation (release of a mature egg) usually occurs on the 14th day of a 28 day cycle, however normal cycles vary 37 in length from 21 to 35 days. Shorter or longer cycles are considered abnormal. Ovulation only occurs when the Hypothalamus, the pituitary gland and the ovaries are in balance, which is called the Hypothalamic-Pituitary-38 Ovarian Axis. Physical or emotional stress can disrupt the balance, with some women being more vulnerable than 39 others. Examples of physical stress include regular strenuous exercise or weight loss. Normal bleeding occurs for 40 one to seven days. During this time a total of less than 80ml (four tablespoons) of blood is lost. Losses greater 41 than this are considered abnormal as are the passing of clots during menstruation. Some women have very light 42 transient blood loss, commonly known as 'spotting' just after ovulation. This appears to be related to the drop in 43

estrogen immediately following ovulation. Heavier bleeding between periods is not uncommon, but is considered
abnormal. When the hypothalamus, pituitary gland and ovaries fall out of balance, all the abnormalities and
problems occur in the menstrual cycle. This balance or harmony of the glands can be reinstated artificially with
the use of Quantum Entrainment through an Advanced Quantum Biological Device that's being developed by

48 me, called "Ellynizer". Once the balance is

# $_{49}$ 2 Introduction

healthy menstruation of a healthy woman involves the complex interaction of the hypothalamus, pituitary, ovaries,
uterus, prostaglandins, and neuroendocrine factors. The ovarian hormones stimulate the target organs of the
reproductive tract and exert feedback effects on the CNS-hypothalamic-pituitary unit to influence its hormone
secretion. Disruptions can occur at any step in this multi-faceted process, resulting in hormonal imbalance and
menstrual irregularities such as dysmenorrhea (painful periods), Pre-Menstrual Syndrome, and impaired fertility.
In order to understand the process of Quantum Entrainment on dysmenorrhea, PMS and dysfunctional uterine

56 bleeding, and their potential etiologic factors, it is important to understand the menstrual cycle.

# 57 **3 II.**

#### 58 4 Menstrual Cycle

The median menstrual cycle length is 28 + 3 days and the average duration of menstrual flow is 5 + 2 days. The cycle, which can be divided into a follicular phase and a luteal phase, results from complex interactions between the hypothalamus, pituitary, and ovary.

This cyclical process, which requires clear communication between the participating glands, is regulated in 62 part by complex changes in the concentrations of five hormones: gonadotropinreleasing hormone (GnRH), follicle-63 stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E), and progesterone (P) (Figure 1). The 64 interplay of these hormones is extremely complicated, with the steroid hormones (E, P) exerting both negative 65 and positive feedback effects on gonadotropin secretion (LH, FSH). The release of LH and FSH from the pituitary 66 is dependent on the secretion of GnRH from the stimulating secretion of E and P. Virtually all hormones are 67 released in short bursts or pulses at intervals of 1 to 3 hours, so constant levels are not observed in the circulation. 68 69 The frequency and amplitude of the pulses are modulated by steroid hormones and vary throughout the cycle. 70 But when these are not modulated properly due to various causes like physical/mental stress, irregularities 71 and complications of the menses. In this case of unsynchronized modulation of hormones, Advanced Quantum Biological Device -Ellynizer can artificially entrain healthy normal modulation in the frequency and amplitude 72 73 of the hormonal releases. There are four distinct phases characterized by histological changes that take place in the uterine endometrium and the hormonal release. contraceptive pills etc. it results in the ultimate The 74 proliferative phase, also referred to as the estrogen phase, begins approximately 5 days after menstruation and 75 lasts for about 11 days. E secreted by the ovary stimulates the growth of the endometrium. The stroma cells 76 and epithelial cells begin to proliferate rapidly, uterine glands begin to grow and elongate, and the spiral arteries 77 begin to grow in order to supply the thickened endometrium. Rising E levels then trigger the midcycle LH surge, 78 79 which induces ovulation. When ovulation occurs, the endometrium is approximately 3-4 mm thick. At this time 80 the endometrial glands secrete a thin, stringy mucus, which protects and leads the sperm into the uterus.

The luteal or secretory phase, also called the progesterone phase, occurs after ovulation and lasts for about 12 days. The corpus luteum secretes high quantities of P and some E. The E causes slight cellular proliferation in the endometrium. P causes significant swelling of the endometrium and converts it to an actively secreting tissue. P also inhibits myometrial (uterine smooth muscle) contractions, in large part by opposing the stimulatory actions of E and prostaglandins. The endometrium reaches a thickness of 5-6 mm about one week after ovulation. The purpose of this process is to prepare the uterus for implantation of the ovum if fertilization occurs.

In the premenstruation or ischemic phase, if pregnancy has not occurred, the coiled arteries constrict and the endometrium becomes anemic and shrinks a day or two before menstruation. The corpus luteum of the ovary begins involution. This lasts about 2 days and is terminated by the opening up of constricted arteries, the breaking off of small patches of endometrium, and the beginning of menstruation with the flow of menstrual fluid.

The desquamation of the endometrium, or menstruation, is caused by the sudden fall in blood P and E, which results from regression of the corpus luteum. This deprives the highly developed endometrial lining of its hormonal support. The immediate result is profound constriction of the uterine blood vessels, which leads to diminished supply of oxygen and nutrients. After the initial period of vascular constriction, the endometrial arterioles dilate, resulting in hemorrhage through the weakened capillary walls. The menstrual flow consists of this blood mixed with the functional layer of the endometrium. Prostaglandins are thought to mediate both the initial vasoconstriction as well as the uterine contractions accompanying menstrual flow.

## 99 **5** III.

#### 100 6 Menstruation Problems

The Menstrual Cycle has been the subject of many traditional tales, myths and mysteries. The hormonal 101 changes during the cycle affect women physically, psychologically and behaviorally. The major problems that 102 103 women suffer are Dysmenorrhea and Dysfunctional Uterine Bleeding. a) Dysmenorrhea Dysmenorrhea, or painful 104 menstruation, is one of the most common gynecological complaints. It is estimated to affect almost half of all women at some time during their childbearing years, usually appearing during adolescence and tending to decrease 105 with age and following pregnancy.Lower abdominal cramping and pain that may radiate to the thighs and lower 106 back is the most prevalent symptom. Headache, nausea, constipation or diarrhea, and urinary frequency are 107 often present, and vomiting may also occur. It is characterized by pain occurring on the first day of menses, 108 usually coinciding with the onset of flow, but may not be present until the second day. tend to peak 24 hours 109 and usually subside after 2 days. While many women suffer mild discomfort during menstruation, dysmenorrhea 110 is present if pain prevents normal activity and requires over-the-counter or prescription medication. 111

112 There are three types of dysmenorrhea: primary, secondary, and membranous. Primary is characterized 113 absence of an organic etiology, while secondary dysmenorrhea is associated with specific diseases or disorders, such as endometriosis, ovarian cysts, pelvic inflammatory disease, adenomyosis, cervical stenosis, fibroid polyps, 114 115 and possibly uterine displacement with fixation. Membranous dysmenorrhea (uterine cast) is rare and causes 116 intense cramping pain as a result of the passage of the intact endometrial cast through an undilated cervix. The most common misdiagnosis of primary dysmenorrhea is secondary dysmenorrhea due to endometriosis. With 117 endometriosis, the pain increases 1 to 2 weeks before the menses, reaches a peak 1 to 2 days before, and is 118 relieved at the onset of flow or shortly thereafter. The use of intrauterine devices (IUDs) may also cause severe 119 cramping. A of women suffering from dysmenorrhea are diagnosed with primary dysmenorrhea. 120

b) The Role of Prostaglandins in the Etiology of Primary Dysmenorrhea Prostaglandins (PGs) are hormone-like compounds that function as mediators of a variety of physiological responses such as inflammation, contraction, vascular dilation, and platelet aggregation. They are modified forms of unsaturated fatty acids that are synthesized in virtually all cells of the body. Studies have demonstrated that PG levels in the female reproductive tract affect the cyclic regression of the corpus luteum and the shedding of the endometrium. PGs may also mediate the effect of LH on ovulation.

The association between the symptoms of dysmenorrhea and intrauterine production of PGs goes back 40 years 127 to the report of Pickles, who first identified a substance in menstrual fluid which stimulated contractions of human 128 129 uterine smooth-muscle strips. This menstrual stimulant was subsequently found to contain PGF2? and PGE2, with the PGF/PGE ratio higher in the endometrium and menstrual fluid of women with primary dysmenorrhea. 130 131 PGF2? and PGE2 have opposing vascular effects causing vasoconstriction and vasodilation, respectively. While 132 PGF2? administration stimulates uterine contractility during all phases of the menstrual cycle, PGE2 may inhibit 133 myometrial contractility during menstruation and stimulate it during the proliferative and luteal phases. Since they are both formed from a common precursor, arachidonic acid, the increase in PGF2?/PGE2 ratio indicates 134 that synthesis can be directed preferentially towards the PGF compounds. Several studies suggest that women 135 with primary dysmenorrhea have elevated concentrations of PGF2? and/or its metabolites in the endometrium, 136 menstrual fluid, and peripheral circulation. 137

These findings have led to the hypothesis that painful menstruation may be due to hypertonicity of 138 the myometrium with accompanying uterine ischemia caused by the local release of excessive amounts of 139 PGs.Furthermore, escape of PGs from the uterus into the systemic circulation could be responsible for other 140 symptoms of dysmenorrhea such as GI disturbances, faintness, dizziness, and headaches. This theory is supported 141 142 by several research findings: 1) higher PG levels (especially PGF2?) during the secretory phase than in the proliferative phase of the menstrual cycle; 2) high PG levels and high PGF2?/PGE2 ratio found in the 143 endometrium and menstrual fluid of women with dysmenorrhea; 3) administration of PGs produces symptoms 144 similar to dysmenorrhea; and 4) PG inhibitors successfully relieve symptoms of dysmenorrhea. 145

PG synthetase inhibitors (non-steroidal antiinflammatory drugs), such as ibuprofen, mefenamic acid, naproxen, and indomethacin, have been used as analgesic treatment for dysmenorrhea since the early 1970s. Prior to their discovery, women who had dysmenorrhea were dependent largely on narcotics or oral contraceptives for pain relief. PG inhibitors block PG synthesis early in the inflammatory reaction by inhibiting the cyclooxygenase pathway. Once pain has become severe, relief is unlikely. However, these drugs should not be used prior to the onset of menses because of their teratogenic potential.

152 In a comprehensive review of clinical trials of PG inhibitors in the treatment of primary dysmenorrhea, it was found that significant pain relief was reported for each of the PG inhibitors for the majority of women. 153 154 However, the authors concluded that 9% to 22% of dysmenorrheic women will not benefit from PG inhibitor 155 treatment, possibly because some of these women may have secondary dysmenorrhea. While PG inhibitors are generally recognized as effective against pain, there are drawbacks. These drugs are not selective in their 156 inhibition of PGs, translating to a reduction of all PGs, good or bad. In addition, possible side effects include c) 157 Dysfunctional Uterine Bleeding Abnormal uterine bleeding includes excessive bleeding, irregular bleeding, and 158 absence of bleeding. In about 25% of patients, these menstrual irregularities are due to organic causes. Possible 159 organic causes of abnormal uterine bleeding include, but are not limited to: endometriosis, polycystic ovary 160

#### 9 G) ENDOMETRIAL ATROPHY (OR THRESHOLD BLEEDING)

syndrome, blood dyscrasias, thyroid dysfunction, pelvic inflammatory disease, anorexia nervosa, diabetes mellitus, 161 pituitary disorders, uterine fibroids, cervical stenosis, cervicitis, endometrial polyps, gynecologic carcinoma, 162 syphilis, vaginal adenosis, adrenal disorders, and corpus luteum cysts. The use of oral contraceptives (as well as 163 their discontinuance), anticoagulants, corticosteroids, and IUDs can also cause abnormal uterine bleeding. For 164 the remainder of patients, there is absolutely no organic pathologic condition but rather a functional abnormality 165 in the hypothalamic-pituitary-ovarian axis, defined as dysfunctional uterine bleeding (DUB). Before reaching a 166 diagnosis of true DUB, the clinician must rule out any underlying pathologic conditions. Patterns of abnormal 167 uterine bleeding and possible underlying medical causes are described below: 168

Menorrhagia is heavy or prolonged menstrual bleeding that may occur as a single episode or on a chronic basis. Normal menstrual flow lasts about 5 days and produces a total blood loss of 60 to 250 ml. In menorrhagia, the menstrual period is extended and total blood loss can range from 80 ml to overt hemorrhage.

172 Hypomenorrhea is unusually light menstrual flow, sometimes only "spotting."

Metrorrhagia is uterine bleeding that occurs irregularly between menstrual periods. The bleeding is usually light, although it can range from staining to hemorrhage.

Polymenorrhea describes menstruation that occurs too frequently. dizziness, headache, nausea, vomiting, heartburn, and diarrhea, as well as GI damage with protracted use.

Cyclic administration of oral contraceptives, usually in the lowest dosage but occasionally with increased estrogen, is also used to alleviate pain. The mechanism of pain relief may be related to absence of ovulation or to altered endometrium resulting in decreased prostaglandin production during the luteal phase. Surgery is a rare form of intervention used in women who do not respond to medication.

Oligomenorrhea is abnormally infrequent menstrual bleeding characterized by 3 to 6 menstrual cycles per year. When menstrual bleeding does occur, it can be profuse and prolonged or decreased in amount. Amenorrhea (secondary) is the absence of a menstrual period for 3 or more months in women with past menses, precluding normal physiological causes such as pregnancy, lactation, and menopause.

# <sup>185</sup> 7 d) Etiology of Dysfunctional Uterine Bleeding

Dysfunctional uterine bleeding occurs most commonly at the extremes of reproductive age, with 20% of cases 186 in adolescence and greater than 50% in patients over age 40. Normal endometrial bleeding occurs as a result of 187 stimulation of the endometrium by the physiologic levels and balance of estrogen and progesterone present in the 188 normal ovulatory cycle and by the subsequent rapid withdrawal of these two hormones. This withdrawal results 189 in complete and rapid shedding of the entire functional layer of the endometrium. Various disturbances in this 190 balanced estrogen-progesterone relationship can result in four clinical etiologies of true DUB: e) Nonovulatory 191 DUB Greater than 70% of DUB cases are associated with anovulation. The bleeding in anovulatory women is 192 generally the result of continued stimulation of the endometrium with unopposed estrogen, which occurs when 193 there is a dysfunction of the hypothalamic pituitary-ovarian axis. The endometrium, thickened by the estrogen, 194 then sloughs incompletely and irregularly, and bleeding becomes irregular, prolonged, and/or profuse. The 195 absence of progesterone results in deficient endometrial prostaglandins so that appropriate spasm of the coiled 196 arterioles is lacking. This also results in irregular and incomplete shedding of the endometrium. 197

## <sup>198</sup> 8 f) Irregular Ripening of the Endometrium (Luteal Phase

199 Defect)

This occurs in ovulatory cycles where the corpus luteum production of progesterone is inadequate to permit development of a receptive endometrium. Any disturbance of follicular growth and development can produce an inadequate follicle and a deficient corpus luteum. Patients with luteal phase defects can present primarily with DUB manifested as premenstrual bleeding, menorrhagia, or polymenorrhea.

Irregular (or Prolonged) Shedding of the Endometrium -Irregular shedding of the endometrium is apparently due to slow degeneration of the corpus luteum with prolonged exposure of the menstruating endometrium to the waning progesterone. Clinically, irregular shedding of the endometrium manifests itself by cyclic prolonged menstruation, which may be profuse.

# <sup>208</sup> 9 g) Endometrial Atrophy (or Threshold Bleeding)

The normal amount of estrogen secreted during the proliferative phase of the cycle results in a stable endometrium that is intact and does not bleed. In the absence of estrogen, or with the minimal levels present premenarchally or postmenopausally, the endometrium is so unstimulated and atrophic that no bleeding occurs. However, with persistent intermediate levels of estrogen, irregular bleeding occurs. This is because there is

The hypothalamus consists of only 0.3 % of the total brain, measures 4 cm 3, and weighs approximately 10 g. Despite its small size, it contains many nuclei that are responsible for endocrine regulation, reproduction, metabolism, temperature regulation, emotional responses, and electrolyte balance. The hypothalamus lays beneath the thalamus, hence, the nomenclature. Laterally, it is bordered by the anterior part of the subthalamus, the internal capsule, and the optic tract. The hypothalamus forms the lateral wall and floor of the third ventricle. The median eminence of the hypothalamus extends to the anterior pituitary and contains neurosecretory neurons

that affect hormone production from the anterior pituitary. The hypothalamus is comprised of three zones:

lateral, medial, and periventricular. Within each zone lie several nuclei, where the arcuate nucleus is pertinent to reproduction. The arcuate nucleus is responsible for the production of GnRH. GnRH is secreted into the portal pituitary circulation, reaching the anterior pituitary to affect FSH and LH release from the anterior pituitary. The hypothalamus also influences thyroid function via TRH (corticotropin -releasing hormone), adrenal function via CRH (coricotropin-releasing hormone), andgrowth and metabolic homeostasis via GHRH (growth hormonereleasing hormone).

The pituitary gland is a pea-sized gland, also known as the master endocrine gland. It measures  $12 \times 8$  mm 226 and weight approximately 500 mg. It is located beneath the third ventricle and above the sphenoidal sinus in a 227 bony cavity called the sellaturcica. The adult pituitary gland contains two major parts: the adenohypophysis and 228 the neurohypophysis. The neurohypophysis is a diencephalic down growth connected with the hypothalamus, 229 while the adenohypophysis is an ectodermal derivative of the stomatodeum. The pituitary gland can also be 230 divided into two major lobes: anterior and posterior. The anterior lobe is equivalent to the adenohypophysis, 231 while the posterior lobe is equivalent to the neurohypophysis. The difference is that the nomenclature of anterior 232 and posterior lobes does not include the infundibulum, which enough estrogen to stimulate the endometrium but 233 not enough to stabilize it, keep it intact, and maintain it. 234

235 IV.

# <sup>236</sup> 10 Anatomy of Menstrual Cycle and the Pathway of Solving <sup>237</sup> the Menstrual Problems

The initial signals for a menstrual cycle are initiated from the very central nervous system (CNS) that also controls 238 all the biological functions of the body. The two major sites of action within the CNS, which are important in 239 the regulation of reproductive function are the Hypothalamus and Pituitary. extends from the hypo-thalamus to 240 the pituitary gland, which contains neural hypophysial connections and is pituitary contains several cell types: 241 242 gonadotropes (responsible for secretion of FSH and LH), thyrotropes (responsible for the secretion of thyroid-243 stimulating hormone [TSH]), adrenocorticotropes (responsible for the secretion of ACTH), somatomammotropes (responsible for the secretion of GH), and lactotropes (responsible for the secretion of prolactin). In addition to 244 245 these hormones, the anterior pituitary secretes activin, inhibin, and follistatin, which play a role in menstrual cycle regulation. The posterior pituitary lobe contains two cell types that secrete ADH (antidiuretic hormone) 246 and oxytocin. The communication between the hypothalamus and the anterior pituitary is vascular; continuous 247 with the median eminence. The anterior however, it is a neuronal connection between the hypothalamus and the 248 249 posterior pituitary.

The gonads in the female consist of the bilateral ovaries. The ovaries are located in the pelvis along the sides 250 251 of the uterus. In reproductive-age women, ovaries measure approximately  $2.5 \times 3 \times 1.5$  cm in size. Laterally, 252 the ovary is attached to the pelvic sidewall by the infundibulopelvic ligament, which contains the vascular supply 253 to the ovary (ovarianatery and vein). The ovary consists of an outer cortex and an inner medulla. The ovarian follicles are found in the cortex, while the medulla mainly contains fibromuscular tissue and vasculature. Each 254 255 ovarian follicle consists of an oocyte surrounded by layers of granulose and theca cells. These layers will vary depending on the maturation stage of the oocyte contained within the follicle. Within the ovarian cortex, follicles 256 can be found in different stages of development. Earlier stages of follicular development are independent of central 257 nervous system hormone production, while later stages of follicular development will depend on reproductive 258 hormones produced by the central nervous system. The growing ovarian follicle will produce estradiol from the 259 granulose cells. After ovulation, the remnant cells of the follicle luteinize and start secreting progesterone. The 260 granulosa cells are also responsible for the secretion of inhibin as well as anti-Müllerian hormone (AMH). The 261 262 uterus is largely a receptive organ to all the steroid hormones that emanate from the endocrine glands. The uterus is a fibromuscular organ that is bordered anteriorly by the urinary bladder and posteriorly by the rectum. The 263 uterus can be divided into two major portions: an upper body (corpus) and a lower cervix. The hollow portion of 264 the uterus contains a mucosal lining called the endometrium. The endometrium contains several layers of cells: 265 the basal layer and the superficial layer. The basal layer is responsible for the regeneration of the endometrial 266 cells. The superficial layers undergo the cyclic changes of the menstrual cycle. The endometrium normally 267 proliferates in response to the rising estradiol levels in the first half of the menstrual cycle and is converted to a 268 secretory layer in response to progesterone produced by the corpus luteum in the second half of the menstrual 269 cycle. If the cycle does not result in a pregnancy, where there is lack of hCG, progesterone production is not 270 maintained by the corpus luteum, and the endometrium becomes unstable and sloughs in preparation for a new 271 272 cycle and another attempt for pregnancy. Just outside the uterus, above the skin of the pelvis, is the region for 273 Ellynizer to entrain Quantum Entanglement with the Hypothalamic-Pituitary-Ovarian Axis.

The intricate and beautiful interconnection between the hypothalamus, pituitary, uterus and the ovaries gives a fantastic advantage in entraining harmonizing impulses in the Hypothalamic-Pituitary-Ovarian Axis. Quantum Entrainment over the HPO Axis would reinstate harmony in the menstruation by balancing the proper production ofgonadotropinreleasing hormone (GnRH), follicle-stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E), and progesterone (P). Disruption or imbalance in the production of these five hormones leads to most of the unexpected menstrual problems. With this phenomenon the specifically designed harmonizing mild impulses, called the Elly Pulses induces balanced regulation in the menstrual cycle. For the entrainment Elly

Pulses utilizes the feedback mechanism of the HPO Axis. The design of Elly Pulses cannot be disclosed due to 281 patent concern. The feedback mechanism of the HPO Axis will harmonize the menses. Once the Elly Pulses are 282 entrained with the HPO Axis, the specific fusion of resonating wave forms induces the same harmonizing resonance 283 to the entire network of HPO Axis, hence the halted neural pathways and the stressed pathways get relieved of odd 284 overwhelming neural firings along with neural disruptions. Therefore neural signals for the modulated bursts of 285 those five basic and most crucial hormones achieve proper modulation. Elly Pulses are a fusion of different forms 286 of impulses that will go through the pelvis to the Uterine region of the female body, thereafter entrain throughout 287 the entire Hypothalamic-Pituitary-Ovarian Axis. Once entrained, it'll eliminate the hormonal imbalances within 288 the body that cause the most menstrual problems like Dysmenorrhea, DUB etc. Also, the terrible mood swings 289 in Pre-Menstrual Syndrome are the result of complex imbalance in the level of hormones. So, Ellynizer fixes 290 the mood swings as well. Theneural network of the HPO Axis acts as a pathway of Quantum Entrainment for 291 the Ellynizer. Past cases of Ellynizer's predecessor "Miracurall" had proven the promising impact of Quantum 292 Entrainment to resolve and cure diseases and complications like Diabetes Mellitus and Tinnitus. In the line of 293 Advanced Quantum Biological Devices right after Miracurall -Ellynizer and Raksanizer will be the solutions to 294 some of the mankind's most aboriginal and day-today complications like Menstrual Problems and Neurological 295 Disorders. 296

# <sup>297</sup> 11 Global Journal of

298 Medical Research

# 299 12 Summary

Advanced Quantum Biological Devices (AQBD) are the future of mankind's health issues. Without health life is 300 colorless, so no comprise can be made with the health of mankind. Quantum Entrainment has opened a gateway 301 to the future where no health issue will remain unresolved. Neural network of the human body is the Introduction 302 303 to Ellynizer -An Advanced Quantum Biological Device for Eliminating Menstrual Problems most intricate web that handles literally all activities of the human biology. But sometimes due to different causes, the recovery 304 system of this network gets halted, hence it gives birth to varieties of health issues. Quantum Entrainment 305 reinstates the recovery mechanism of the neural network responsible for specific biological function. The more 306 entrainment pathways we discover, the more we cure diseases. 307

VI.



Figure 1: Figure 1 Global



#### 309 .1 Acknowledgment

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