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KEYNOTE SPEAKER

Dr. Cyaria Tongden Gurung
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Rina Hidayati Pratiwi
GICICHLSR1716056

The Novel Bioactive Compound Of Phenazine Derivative Produced By Endophytic Actinomycetes From Neesia Altissima (Malvaceae)

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Abstract

Endophytic actinomycetes has been known as a promising source of new antibiotics against susceptible and resistant forms of microorganisms. In this study, we isolated, identified endophytic actinomycetes that isolated from Neesia altissima based on phylogenetic analysis of DNA sequence. The antibacteria bioactive compounds was also isolated from the endophytic actinomycetes based on elucidation of the structure. The endophytic actinomycetes isolated from roots, barks, and fresh leaves of Neesia altissima collected from Halimun-Salak Mount were screened their potential against pathogenic bacteria using crude extract dilution and diffusion disc methods and then identified. The crude extracts obtained from two endophytic actinomycetes that exhibited potential antibacterial activity by showing clear zone surrounding the pathogenic bacteria. Phylogenetic tree was constructed using a nearly complete sequence within the 16S rRNA gene. Isolation and identification of bioactive compounds were carried out using TLC, NMR and MS analyses. Identification of the potential endophytic actinomycetes based on phylogenetic analysis of DNA sequence generated from 16S rRNA region determined as Streptomyces sp. UICC B-92. Crude extract of Streptomyces sp. UICC B-92 showed antagonistics activity against Gram positive bacteria, Bacillus cereus ATCC 10876 and Staphylococcus aureus ATCC 25923. The bioactive compound that isolated from endophytic actinomycetes was phenazine derivative. The novel bioactive compound of phenazine derivative, would be expedient to modify the same in view of another implication, such as anticancer, antifungi, and antioxidant.
Keywords: endophytic, Gram positive bacteria, Neesia altissima, phenazine, Streptomyces .

Arash Shishehian
GICICHLSR1716053

Patient Need's, Desire Vs Dentist Ability In New Methods Of Full Mouth Reconstruction

Arash Shishehian
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Abstract

This presentation summarizes key aspects of the interdisciplinary approach to implant or non implant-based treatment in fully edentulous patients . Measures of success generally include implant integration and health of the surrounding periodontal tissues; in the fully edentulous patients function is the greatest issue for dentist, aesthetics must also be measured as a patient first demand. A successful team approach to treatment mandates that the periodontist have a clear understanding of what is expected in terms of the restorative result, including the restorative materials that will be used, as implant position or teeth alignment can significantly impact this. Equally important, the restoring dentist must understand the surgical treatment options and the procedural limitations in terms of tissue regeneration and implant placement. The goal of this presentation is to sensitize the participant to the changing treatment concepts and methodologies used today in both the surgical and restorative phases of edentulous treatment. The principle areas of treatment explored include: emerging hard tissue management of procedures and materials; enhancing the gingival biotype and gingival volume; implant placement space management and restoration strategies that may impact soft

	and hard tissue stability; and the impact of implant and abutment designs on hard- and soft-tissue volume and post-restoration stability.
Harsha Hirdyani GICICHLSR1716058	**Formulation Of A Synbiotic Health Beverage Using Barley, Buttermilk And Fructooligosaccharide And Its Probiotic Profiling** **Harsha Hirdyani1** **The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India** **Mini Sheth1** **The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India** **Abstract** **Statement of the Problem:** The consumption of probiotic foods is growing intensively in developing countries. Being one of the largest markets of functional foods, it represents a huge growth potential for the food industry and may be explored through the development of innovative ingredients, processes, and products. Fermented foods can be developed and studied for their functional properties in terms of probiotic content. **Objectives:** To utilize functional ingredients barley, buttermilk and fructooligosaccharide to develop barley ambil and study it's probiotic content. **Methodology & Theoretical Orientation:** Barley was cooked, fermented with buttermilk, followed by addition of liquid FOS (5%) and salt-cumin for flavor to formulate a beverage. 1ml of beverage was enriched in deMan, Rogosa and Sharpe (MRS) broth and different species were isolated on MRS agar. Specific probiotic strains of Lactobacillus and Bifidobacterium were isolated using multiplex PCR. Species-specific primer pairs for multiplex PCR from the 16S rRNA, 16S-23S rRNA and 23S rRNA genes were used to detect the bacterial strains with high specificity in beverages. **Findings:** A total of 20 species of both Lactobacillus and Bifidobacterium were isolated. Bifidobacterium bifidum, Bifidobacterium pseudocatenulatum, Bifidobacterium animalis, Bifidobacterium adolescentis, Bifidobacterium breve and Bifidobacterium pseudolongum were the predominant ones (>90%). Amongst the Lactobacillus species Lactobacillus acidophilus, Lactobacillus casei, Lactobacillus paracasei, Lactobacillus reuteri Lactobacillus plantarum, and Lactobacillus kitasatonis were predominant (>90%). These strains also have known health benefits in management of metabolic syndrome. **Conclusion & future scope:** Locally available functional ingredients can be used to develop functional foods. Barley ambil has probiotic potential in terms of having several species of Bifidobacteria and Lactobacillus which are known to improve gut health and thereby impart health benefits to subjects with chronic diseases. Development of such value added products with synbiotic properties shall also fulfil the increasing demand of health foods by the consumers. **Keywords:** symbiotic; prebiotic, probiotic; fermentation; functional food; health beverage
Ivanna Williantarra GICICHLSR1716059	**Dna Damage In Human Embryonic Stem Cells Cultured On Feeder-Free Conditions: The Impact Of Cell Density** **Ivanna Williantarra** **Biotechnology Study Program, Faculty Of Bioscience, Indonesia International Institute For Life Sciences** **Abstract** The capability of human embryonic stem cells (hesc) to differentiate to all kind of cell types holds a very promising future for clinical applications. However, hesc's potential is hampered by the genetic aberrations which repeatedly reported in hesc. We investigated the correlation between cell density and dna breaks in hesc kept in a feeder-free culturing system. The experiments were

	conducted in two feeder-free systems, laminin-521/nutristem® and matrigeltm/nutristem®. We found that the feeder-free culturing systems induce fewer dna damage in the cells as compared to the feeder-based system. Cell density also had no effects to dna damage in feeder-free system while it did in feeder-based system. Keywords: human embryonic stem cell, genetic aberrations, cell density, feeder-free.
Ogochukwu Fidelia Offu **GICICHLSR1712067**	**The Impact And Practice Of Community Pharmacy On Public Health Management In Enugu Metropolis, Nigeria** **Ogochukwu Fidelia Offu** **(BPharm, MmedScPH, M.Pharm, FPCPharm)** **Head, Department of Clinical Pharmacy and Biopharmaceutics, Faculty of Pharmaceutical Sciences, Enugu State University of Science and Technology (ESUT), Agbani, Enugu State, Nigeria.** **Abstract** **The increasing impact and practice of Community Pharmacy in strategic public health activities, management and administration in Nigeria in general and Enugu State metropolis in particular define the overall need for integral, participatory, and inclusive public health best management practices in Nigeria. Systematically, the burgeoning gap between real Community Pharmacy practice and Public Health management and administration in Nigeria suffice the raison d'être for a deliberate, collaborative, targeted, proactive and integrated health management policy as advocated by this study. The unprecedented rise in prevalence of chronic diseases has led to an increased pressure in the Nigeria public health delivery systems, hospitals and health research. Community pharmacy practice as such, provides a somewhat basic one-stop health care integrated system to impact conscionable health practice among the ailing public; to improve the health status of the public proactively and sufficiently with coordinated referral system. The study also aims to identify and determine the capability of the community pharmacists to carry out public health activities effectively; identify and assess the basic health activities that are feasible to be carried out in community pharmacies including the timely dispensation of targeted interventions that will encourage and boost the practice of public health activities sufficiently and efficiently; enhance the overall health indices and economic ecology of community pharmacy practice as cogent public health outfit in the state; to identify barriers and milestones that will assist policy makers/regulators to allocate and utilize resources prudently; to accelerate and improve the grossly insufficient or dilapidating public health infrastructure in Enugu metropolis and Nigeria in general.** **The study consisted of a cross sectional study after which a Delphi study (of three rounds) was carried out. Pre-tested and validated questionnaires were the instruments of data collection. Comprehensive spread sheet analyses of cross-sectional data were determined by SPSS among other un/structured scientific methods to reach consensus. The results indicate and implicate the urgent need for inclusive health policy in Nigeria; barriers identified include: inadequate funding and staff, public corruption and regulation, insufficient knowledge, lack of time and space, poor cooperation of clients and poor or dearth of interoperability measures etc. 81 feasible public health activities and 18 interventions were identified from the Delphi study. 11 experts participated in each round of the Delphi study. Out of the 88 items suggested to be feasible by the experts in the first round of the Delphi study, consensus was reached for 81 items by the end of the third round. By the end of the third round, consensus was reached for 18 out of 20 interventions that were suggested by the experts in the first round. The study concluded that the overall health system gap (impact and implication) between community pharmacy practice**

	and public/primary health care delivery system in Enugu-Nigeria is grave and needed urgent public-private conscionable, collaborative, articulated and practicable intervention. The time is now.
Zahra Safavi Bayat GICICHLSR1716063	**The Effect of Training the Implementation of Evidence-Based Nursing Practices in clinical setting in Tehran, Iran** **Kazem Najafi1** **Nursing Faculty, Medical - Surgical Department,Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran** **Zahra Safavi Bayat** **Nursing Faculty, Medical - Surgical Department,Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran** **Mehdi Safari** **Nursing Faculty, Medical - Surgical Department,Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran** **Abstract** **Background: Nurses are the largest group providing health services, and play an essential role in the ongoing care, health promotion and preservation. Therefore, familiarity with the current evidence and research findings is essential for nurses.** **Objective: The aim of this study was to determine the attitudes of nurses before and after the training program of implementing evidence-based nursing practices. Materials and methods: This quasi-experimental study was conducted on forty training nurses selected by purposive sampling method from two hospitals in Tehran, Iran. The data collection tool was a questionnaire that was completed by the subjects during pre-test and post-test. The data were analyzed by statistical software SPSS 19. Results: The majority of nurses (97.5%) had moderate attitude before training, but 52.2% immediately after training, and 75% in the second month after the training had high levels of attitude.** **Conclusion: The results showed that the educational program had a positive impact on nurses' attitude. Therefore, to be compatible with scientific progresses achieved in the presen world and to overcome the obstacles and difficulties of evidence-based practice, it is emphasized to train implementing methods and it is hoped that this study can help implementation of evidence-based nursing by preparing changes in the clinical setting with the positive change in attitude and can assist the implementation of evidence-based nursing practices.**
Embolo Enyegue Elisee Libert GICICHLSR1716064	**Molecular detection of human papillomavirus from abnormal cervical cytology of sensitized women attending screening in some regions of Cameroon** **EmboloEnyegue Elisée Libert** **Department of Biochemistry, Faculty of Sciences, the University of Douala, Cameroon.** **KoangaMogtomo Martin Luther** **Chantal Biya International Reference Center (CIRCB), laboratory of molecular biology, Cameroon.** **Judith Ndongo Torimiro** **Faculty of Medical and Pharmaceutical Sciences, the University of Douala, Cameroon.** **Mouelle Sone Albert** **Oncology unit, Douala General hospital, Cameroon**

NgonoNgane Annie Rosalie
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Abstract

In Cameroon, very few studies have been carried out concerning the assessment for the prevalence of human papilloma virus; although it is a very dangerous virus.

Methods

We conducted a cross-sectional, observational study on 149 Cameroonian women, previously detected positive to cervical lesions using papanicolau test. The aim was to determine the prevalence of HPV genotypes and to correlate with precancerous lesions observedSamples were genotyped using multiplex PCR. The identification of the viral genotypes was performed by the polymerase chain reaction method called multiplex PCR. Primers used were designated from the PRIMER 3 software, the β globin gene was used to check the smooth progress of the multiplex PCR. The amplicons obtained were revealed on an agarose gel by electrophoresis.

Results

Results from the molecular analysis of the data collected, showed that Almost ¾ of the women in the study population presented a low-risk or high-risk variant of HPV. In several cases, combinations of genotypes high-risk HPV and low-risk HPV were encountered, and vice versa. Lesions in which these genotypes were most encountered were ASCUS lesions; Genotype 58 was absent in the whole study. Patients with genotype 16 showed 8.57% ASCUS, 2.85% ASCH and HSIL. No patient with LSIL showed the HRgenotype16. The HR genotype 18showed 5.71% LSIL, HSIL (8.57) increased slightly; it thus presents the genotype that had the highest HSIL rate since 58 and 84 are zero for HSIL.Many women presented genotype 45 and genotype 16. However, the highest rate of LSIL (11.42) was observed in women with genotype 45. Among genotypes LR, genotype 6 was the most predominant with an appearance of ¼ of the LR-HPV. Multiple co-infections were also observed between LR genotypes and HR genotypes.

Conclusion

This study shown that the most representative LR-HPV was genotype 6 (25.44%); genotypes 61 (18.42%); genotypes 11 (17.55%). However, concerning HR-HPV, the most representative subtypes were genotypes 45 (31.42%); genotypes 18 (28.57%); genotype 16(17.13%). These observations shows a real genotypic diversity for HPV and makes it possible to question about the 95% efficacy of an HPV vaccination program based on Cevarix or Gardasil.

Keys words: Human papillomavirus; prevalence, cervical cytology; Cameroon; cervical cancer

Dr.SurenaVahabi GICICHLSR1716066	**Efficacy versus toxicity of freeze-dried bone allografts treated with TGF-β1 and PDGF-BB in osteogenic differentiation of MG-63 osteoblast-like cells** **Vahabi S** **Associate professor of Periodontics department, School of Dentistry** **Shahid Beheshti** **University of Medical Sciences, Tehran, Iran** **Maryam T** **Assistant Professor of Dept. of Dental Biomaterials, School of Dentistry** **Shahid Beheshti** **University of Medical Sciences, Tehran, Iran**

Abstract

Background and aim: Predictable regeneration of alveolar bone defects has always been an important therapeutic challenge in implant dentistry. Allografts including FDBA and DFDBA are some substitutes being widely used and reported as having osteoinductive activities with some degrees of controversy. The aim of this study is to determine the effect of growth factors on osteoinductive activities vs. toxic effects of different bone materials.

Materials and Methods: MG-63 cells were exposed to 60 mg amounts of four different commercially available freeze-dried bone allografts with or without 5 ng/mL of two growth factors (singular or in combination). After 24 and 72 hours of incubation, the effect of water-soluble allograft released materials and soluble growth factors on cell viability and proliferation was assessed using methyl thiazol tetrazolium (MTT) assay. Cell differentiation and mineralization was respectively assessed by real-time quantitative reverse transcription PCR (qRT-PCR) and alizarin red staining after 72 hours of exposure.

Results: The effect of different GFs on cell/allograft containing plates was affected by the allograft type. Early proliferative and late Osseo inductive effects of GFs were more consistent in TGF-β rather than PDGF. PDGF only showed limited Osseo inductivity in terms of accelerating BSP and OC genes. The allograft with greater cytotoxic effect on MG-63 cells caused the lowest differentiation among the groups. In comparison with allograft alone, allograft/transforming growth factor beta-1, and allograft/transforming growth factor beta-1/platelet-derived growth factor-BB caused significant upregulation of bone sialoprotein and osteocalcin osteogenic mid-late marker genes, and resulted in significantly higher amounts of calcified nodules especially in mineralized non-cytotoxic allograft group.

Conclusion: Based on the results of this study, TGF-β can have additional osseoinductive effect on allografts/cells combination and its application may be beneficial in in vitro and clinical regenerative studies if the toxic effects is being considered at the same time.

Key words: Bone allograft, Growth factor, Osteoblast differentiation, toxicity

Mardes Asilo
GICICHLSR1716067

Hand Hygiene Knowledge, Practice And Facilities Utilization Of Pupils In Batangas City: Basis For Proposed Hand Hygiene Activities

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Abstract

This study assessed the hand hygiene knowledge, practice and facilities utilization of pupils in Batangas City during academic year 2016-2017. Using a self-structured questionnaire, the researchers selected one thousand one hundred eighteen (1,118) students as participants in this research. They analyzed the responses of the students through the use of frequency counts, weighted mean, t-test and Analysis of Variance (ANOVA). The study found

	out that school type had the most influence on the students' learning concepts about hand hygiene as well as its implementation and the provision of adequate supplies & facilities. Public school pupils showed higher scores in hand hygiene knowledge, practice and facilities utilization as well as greater interest on the proposed hand hygiene activities. These included, among others, conduct of health teaching on proper hand hygiene technique with disease education and preparation of individual hygiene kit for pupils. On the other hand, grade level was determined not to have significant difference on the pupils' know-how in hand cleansing. This is because regardless of the pupils grade level their knowledge, practice and facilities utilization including interest on the suggested hand hygiene health activities remain the same. It is further recommended that school administrators take action on the pupils' interest regarding hand hygiene health activities proposed in the study. Keywords: hand hygiene, knowledge, practice, facilities utilization, grade level, school type
Christian Kouakou **GICICHLSR1716068**	**Cost-Effectiveness Analysis of FreeO2 Technology for COPD Patients Hospitalized for Acute Exacerbations** **Christian Kouakou** **Department Of Economics, Universite De Sherbrooke, Sherbrooke, Canada** **Abstract** **Context: Chronic obstructive pulmonary disease (COPD) is steadily growing and constitutes an increasingly heavy burden on health-system budgets. FreeO2's automated oxygen-titration and oxygen-weaning technology could help reduce this burden.** **Objective: Conduct a cost-effectiveness analysis of FreeO2 technology versus manual oxygen-titration technology for COPD patients hospitalized for acute exacerbations.** **Methods: The costs for hospitalization and follow-up for 180 days were calculated using a micro-costing approach and include the cost of FreeO2 technology. Incremental cost-effectiveness ratios (ICERs) were calculated using bootstrap resampling with 5,000 replications. The main effect variable was the percentage of time spent at the target oxygen saturation (SpO2). The other two effect variables were the time spent in hyperoxia (target SpO2 + 5%) and in severe hypoxemia (SpO2 < 85%). The resamplings were based on data from a randomized control trial with 47 COPD patients hospitalized for acute exacerbations.** **Results: FreeO2 generated savings of 20.7% of the per-patient costs at 180 days (i.e., -C\$2,959.71). This decrease is nevertheless not significant at the 95% threshold (p=0.36), but the effect variables all improved (p<0.001). The improvement in the time spent at the target SpO2 was 56.3%. The ICERs indicate that FreeO2 technology is more cost-effective than manual oxygen titration with a savings of -C\$96.91 per percentage point of time spent at the target SpO2 [95% CI -301.26; 116.96].** **Conclusion: FreeO2 technology could significantly enhance the efficiency of the health system by reducing per-patient costs at 180 days. A study with a larger patient sample needs to be carried out to confirm these preliminary results.** **Keywords: cost-effectiveness; oxygen-titration; COPD; bootstrap; FreeO2**
Yueh-Fang Huang **GICICHLSR1716071**	**Quality of life after Total Knee Replacement of the elderly in Taiwan** **Yueh-Fang Huang** **School of Nursing, Chang Gung University of Science and Technology, Taiwan.** **Shih-Tsang Tang** **Biomedical Engineering Department, Ming Chuan University, Taiwan.**

Yea-Ing Lotus Shyu
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Abstract
To explore the health-related quality of life (HRQoL) and the related factors among elderly with osteoarthritis (OA) knee after total knee replacement (TKR) in Taiwan during the first year after discharge.
. Methods.
Subjects who were □ 60 year-old with OA knee after undergoing TKR, were recruited in this study from Oct 2014 to Jun 2016 in a medical center of northern Taiwan. Outcomes were measured by Medical Outcomes Study and Short Form-36 Taiwan version. Data were repeatedly collected at pre-surgery, the 1st, 3rd, 6th, 12th months after discharge. Generalized estimating equations analysis (GEE) was used to analyze the trajectories of the outcome variables and related predictors.
3. Results and Conclusions.
Nine male and 22 female were recruited in this study. Most domains of SF-36 improved after discharge, especially in physical function (PF), role limitation due to physical problems (RP), bodily pain (BP), role limitation due to emotional problems (RE), which had lower scores at pre-surgery and could reach higher scores at 6th and 12th month. After controlling for covariates, time (□ = 3.420, p < 0.001 in PF; □ = 3.935, p < 0.001 in RP; □ = 3.191, p < 0.001 in BP; □ = 0.675, p < 0.001 in general health (GH); □ = 2.242, p < 0.001 in social function (SF); □ = 1.142, p = 0.004, in RE; □ = 0.433, p = 0.022, in mental health(MH)), and pre-surgery activities of daily life (ADL) score (□ = 1.277, p < 0.001 in PF; □ = 1.231, p = 0.011 in RP; □ = -0.582, p < 0.001 in BP; □ = 0.340, p = 0.032 in SF) were the most important factors that influenced the HRQoL of the elderly after TKR during the 12 months after discharge.
We found the HRQoL of the elderly still need 3 months to recover, and would keep improving over time during the first year after TKR.
Keywords: osteoarthritis, knee, quality of life, total knee replacement, SF-36

Pi-Wen Huang **GICICHLSR1716073**	**The effectiveness of fitting pressure garments for Moderate & Minor burn patients-A Review of the literature** **Pi-Wen Huang** **Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taoyuan, Taiwan** **Chih-Wei Lu** **Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taoyuan, Taiwan** **Abstract** **Burns reconstruction is like running multiple barriers marathon; it is a long journey of a burn patient conquering various difficulties of healing burn scars. The continued proliferation scars and fear is the greatest enemy. Contracture like burned rubber band, they never have to restore the original flexibility** **Pressure garments therapy is the essential care for prevention and treatment of hypertrophic scarring and keloid after burn injury. However, because of the size of the burn area, burns degree, age, race and personal physical condition, it will affect wound healing. Although it represents the standard care for prevention and treatment of HS from burns. In general, the application of 15–25 mmHg pressure is most commonly used in clinical practice** **These minor and moderate are burn patients are able to wear pressure garments in the very beginning. Following the guideline when the scar closed, scars should always be revaluated 6 months after burn to determine whether additional scar management interventions are required or whether preventive therapy can be terminated.**

	Key word: Occupational Therapists (OT), Hypertrophic Scar (HS), Keloid, Total Body surface area (TBSA), rehabilitation, Pressure Garments (PG), Vancouver Scar Scale (VSS)
Qianying Yang **GICICHLSR1716075**	**Transcriptome Comparison Reveals the Adaptive Evolution of Two Contrasting Ecotypes of Zn/Cd Hyperaccumulator Sedum alfredii Hance** **Qianying Yang** **Ministry of Education Key Laboratory of Environmental Remediation and Ecosystem Health, College of Environmental and Resources Science, Zhejiang University, Hangzhou, 310058, People's Republic of China** **Md. Jahidul Islam Shohag** **Department of Agriculture, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh** **Ying Feng** **Institute of Food and Agricultural Sciences, Indian River Research and Education Center, University of Florida, Fort Pierce, Florida, 34945, United States** **Zhenli He** **Ministry of Education Key Laboratory of Environmental Remediation and Ecosystem Health, College of Environmental and Resources Science, Zhejiang University, Hangzhou, 310058, People's Republic of China** **Abstract** **Hyperaccumulating ecotype (HE) and non-hyperaccumulating ecotype (NHE) of Sedum alfredii Hance belong to the same species but exhibit contrasting characteristics regarding hyperaccumulation and hypertolerance to cadmium and zinc. The Illumina Hiseq 2500 platform was employed to sequence HE and NHE to study the genetic evolution of this contrasting trait. Greater than 90 million clean reads were obtained and 118,479/228,051 unigenes of HE/NHE were annotated based on seven existing databases. We identified 149,668/319,830 single nucleotide polymorphisms (SNPs) and 12,691/14,428 simple sequence repeats (SSRs) of HE/NHE. We used a branch-site model to identify 18 divergent orthologous genes and 57 conserved orthologous genes of S. alfredii Hance. The divergent orthologous genes were mainly involved in the transcription and translation processes, protein metabolism process, calcium (Ca2+) pathway, stress response process and signal transduction process. To the best of our knowledge, this is the first study to use RNA-seq to compare the genetic evolution of hyperaccumulating and non-hyperaccumulating plants from the same species. In addition, this study made the sole concrete for further studies on molecular markers and divergent orthologous genes to depict the evolution process and formation of the hyperaccumulation and hypertolerance traits in S. alfredii Hance.** **Keywords: comparative transcriptome, SSRs, SNPs, divergent orthologous genes, Sedum alfredii Hance, hyperaccumulator, zinc, cadmium**
Cyaria Tongden Gurung **GICICHLSR1716076**	**Evaluation of Hydroponic Cultivation Techniques as a Supplement to Conventional Methods of Farming** **Cyaria Tongden Gurung** **Department of Botany, Siliguri College, Siliguri- 734 001, Dist. Darjeeling, West Bengal, India.** **Abstract** **Hydroponics is a science of growing plants in nutrient solutions with or without the use of an artificial medium for providing mechanical support to the roots. The hydroponic gardening concepts have been used since ancient**

times but the concept is gaining popularity only in the recent past especially in the context of global food safety and security. With more and more people clearing the forest cover for construction of residential housing complexes, multiplexes, shopping malls etc. there is an immediate threat to global food safety and security. Therefore, in the context of acute land and food crisis, the soil-less culture or hydroponic cultivation appears to be a very promising alternative to conventional farming for long term sustainability.

The present study was carried out with the objectives of analyzing different hydroponic cultivation techniques and testing their potentialities to be used as a supplement to conventional farming for the cultivation of some vegetable crops like Lycopersicon esculentum, Solanum melongena and Capsicum annuum. The hydroponic techniques followed mainly included Root dipping technique, Media culture and Floating board Methods. The success of hydroponics in the present study was found to be greatly dependent on the availability of nutrients, light, temperature, pH of the nutrient medium and oxygen availability. The extent of nutrient uptake was found to be largely controlled by the pH of the medium and best growth was observed with a half-strength Hoagland solution having a pH of 5.8-6.0.

The soil grown and hydroponically grown plants showed distinct differences in their germination rates, plant vigour, root morpho-anatomy, pigment contents etc. Hydroponically grown plants showed a more luxuriant and faster growth rate, earlier initiation of flowering and fruiting and three to four times higher yield than the soil grown plants. Moreover, hydroponically grown plants were found to be remarkably less susceptible to various kinds of pests and diseases. Based on these promising results, hydroponics, therefore, can be recommended as an alternative to soil based cultivation techniques and may be explored further for sustainable crop production and global food safety.

Keywords: Hydroponics, Root dipping technique, Media culture, Floating board Methods, Vegetable Crops, Conventional farming

Anirudra Gurung **GICICHLSR1716077**	**Colony Morphology Variants Of Acidithiobacillus Ferrooxidans May Prove To Be More Efficient In Bio-Beneficiation Of Sulfidic Ores** **Anirudra Gurung** Department of Botany, St. Joseph's College, Darjeeling, India **Ranadhir Chakraborty** Department of Biotechnology, University of North Bengal, Darjeeling, India **Abstract** Acidithiobacillus ferrooxidans is a gram-negative acidophilic obligate chemolithotroph, capable of deriving energy from the oxidation of ferrous iron and/or elemental sulfur and other various reduced sulfur compounds. The organism is actively involved in the sulfuric acid production and therefore responsible for causing Acid Mine Drainage (AMD) environments. The biological property of oxidation of sulfide moiety of pyritic ores is utilized in bioleaching operations. The present study was carried out with the objective of isolation and characterization of A. ferrooxidans from AMD with special emphasis on generating mutants or stable variants with altered sulfur compound oxidation activity coupled to variation in colony morphology. Collectively the variants were named as colony morphology variants (CMVs) on the basis of phenotypic expression in autotrophic agar (ferrous iron or thiosulfate dissolved in mineral salt solution and solidified with agar) plates. Several acidophilic chemolithautotrophic A. ferrooxidans strains were isolated from AMD samples from Gorubathan (26° 59'N: 88° 42'E, 2800 ft. asl), Darjeeling, India. Rusty pinhead colonies were obtained in modified 9K medium containing 0.8% agar-agar. The colonies however were found to be co-inhabited by acidophilic heterotroph Acidiphilium cryptum that help to scavenge the organic material, produced due to acid hydrolysis of agar-agar,

making the environment conducive for the growth of A. ferrooxidans.

Single cell layered spreading CMVs at a frequency of 27% were obtained from the wild type rusty pinhead colonies when grown in thiosulfate-agar plate. The present study was carried out with four CMV strains viz. DK1S1, GBVIS2, CMOS1, and CMOS2 out of many. There was a marked difference in between the wild and CMVs with respect to their generation time, rate of oxidation of elemental sulfur, thiosulfate, tetrathionate, and copper leaching activity. However no significant difference was found with respect to the rate of oxidation of ferrous iron. The results revealed that these colony morphology variants often reverted back to the wild type when grown in 9K medium.

It was observed that A. ferrooxidans experiences a sub-lethal stress in thiosulfate-agar plate due to accumulation of organic waste materials in absence of heterotrophic partner A. cryptum to which thiosulfate has been found to be toxic. In thiosulfate-agar medium the organic toxic effect is averted by deliberate attempts of the dividing cells to out-migrate by sensing the gradient positively towards energy substrate (i.e. thiosulfate) and move away from the zone of accumulation of toxic organicals, hence resulting into the manifestation of spreading CMVs colonies. Based on these findings, and leaching performances of the variants in the laboratory conditions, it can be concluded that CMVs do possess potential to be used in commercial bioleaching of low grade pyritic ores.

Key words: Acidithiobacillus ferrooxidans, Acidiphilium cryptum, Acid Mine Drainage, Colony Morphology Variants

Shih-Tsang Tang **GICICHLSR1716078**	**Feasibility of Inertial Sensor Based Mobility Assessments** **for Stroke Patients**

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Abstract

Introduction:

Mobility Is Deeply Related To Patients' Ability To Self-Care And Directly Affects Their Daily Lives; Therefore, Mobility Is An Important Indicator Of Life Quality. As A Result, Stroke Rehabilitation Plans Are Usually Based On A Mobility Assessment. However, Due To Its Time-Consuming Nature, A Large Number Of Stroke Patients Undergo An Over-Simplified Assessment Or Do Not Receive An Assessment At All, Which Seriously Affects The Effectiveness Of Rehabilitation. To Help Address This Issue, The Current Study Focuses On The Use Of Inertial Devices To Assist Mobility Evaluation.

Methods:

At Present, Inertial Measurement Technology Is Well Developed And Widely Used In Field Of Human Motion Analysis, Including Animation, Ergonomics,

	Biomechanics …Etc. Therefore, Inertial Devices Have Great Potential To Benefit The Mobility Assessment Of Stroke Patients. This Study Will Be Performed In Accordance With The Rivermead Mobility Index And Will Be Divided Into Four Stages Basing On Difficulty For Inertial Signal Model Constructions. **Results:** This Study Has Been Approved By The Institutional Review Board Of Taipei Veterans General Hospital. The Study Included 40 Subjects (Based On A Literature Review); The Significance Type I Error Was Set At 0.05; Statistical Power Was Set At 80%, And The Rate Of Withdrawal Was Set At 20%. Subject Inclusion Criteria Dictated That Patients Had To Be Of Legal Age, Suffer From Classic Stroke, Have A Brünnstrom's Stage Score Between 2-4, Be Able To Walk Without A Caregiver Nearby, Present No Cognitive Impairment, And Require A Permanent Caregiver. **Conclusions:** Our Study Demonstrated That Inertial Devices Can Help Provide Effective And Valuable Mobility Assessments. In Addition To Traditional 'Yes Or No' Assessment Results, Our Study Also Measured The Duration That Was Required To Complete Each Assessment Item, Which Should Help To Better Elucidate Rehabilitation Outcome Trends. **Keywords: Inertial Sensor, Mobility Assessment, Stroke Patient.**
Zafar Iqbal Channa **GICICHLSR1716079**	**Title: Non-formal CNE program barriers to participation: A comparative study among hospital nurses of two provinces in Pakistan** **Zafar Iqbal Channa** **Dy. Chief Nursing Superintendent (Dy. CNS) Shaheed Zulfiqar Ali Bhutto Medical University (SZABMU/PIMS), Islamabad, Pakistan** **Abstract** **Rapid scientific and technological discoveries have increased demands of specialized nursing care. Knowledge and skills can be restored by engaging nurses in a set amount of continuing nursing education (CNE) program activities. Literature suggested that degree or license is not the end point of education after basic nursing study. Apparently, basic nursing education for practice becomes obsolete within five to ten years of graduation. This obsolescence can lead to the poor performance of nurses in clinical practice. Therefore, study was designed to investigate and compare barriers to participation among hospital nurses of two provinces in Pakistan. Cross sectional descriptive study approach used to collect data through convenience sampling technique of three hundred (n=300) nurses. "Barriers to Participation Questionnaire" (BPQ) was used as research tool. Quantitatively, result interpretation was set as "the lower the mean score in each type of barrier, higher the barrier was measured due to reverse Likert scale rating. Generally, administrative barrier was found higher and most prevalent barrier, work-related barrier was more predictive and financial barriers as predicting barrier as compare to family and personal barrier. Data also revealed that Punjab nurses have greater administrative with mean score of 2.16±0.87 and work-related barriers with mean score of 2.43±0.81 than the nurses from Sindh province with mean score of 2.26±0.75 and 2.81±0.90. Regarding financial barrier, both provincial nurses have equal level barriers than the family and personal barriers among nurses of two provinces. To keep nurses connected with advanced knowledge in rapidly changing health care environment, more opportunities of non-formal CNE programs should be provided for all employed nurses in all provinces.**
Yuchen Wang **GICICHLSR1716080**	**Predicting Risk of Low Birth Weight using Artificial Neural Network** **Yuchen Wang** **St Mark's School, MA, USA**

Betty Wang
Ivy Analytics LLC, PA, USA

Abstract

Objective: Low birthweight is a term used to describe babies who are born weighing less than 2,500 grams (5 pounds, 8 ounces). Over 8 percent of all newborn babies in the United States have low birthweight. This study aims to 1) examine the predictors of low birth weight 2) build a predictive model for low birth weight using artificial neural network and compare its performance to logistic regression model.

Methods: The National Survey of Family Growth (NSFG) 2011-2015 data were used for this study: https://www.cdc.gov/nchs/nsfg/index.htm. NSFG gathers information on family life, marriage and divorce, pregnancy, infertility, use of contraception, and men's and women's health. The survey results are used by the U.S. Department of Health and Human Services and others to plan health services and health education programs, and to do statistical studies of families, fertility, and health.

All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of low birth weight in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.

Results: About 10.2% (n=1339) of 13159 births were low birth weight. A total of 6580 were included in the training sample, 6579 in testing sample.

According to the logistic regression, duration of completed pregnancy in weeks, wantedness of pregnancy of the respondent, education, race, Whether R received public assistance in prior calendar year, Poverty level income, born outside of US were significant predictors for low birth weight.

According to this neural network, the top 5 most important predictors were Duration of completed pregnancy in weeks, Birth order, Formal marital status at pregnancy outcome, Age at time of conception, Labor force status.

For training sample, the ROC was 0.85 for the Logistic regression and 0.83 for the artificial neural network. In testing sample, the ROC was 0.84 for the Logistic regression and 0.79 for the artificial neural network. Artificial neural network had worse performance.

As to calibration measure, predictions made by the neural network were (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.

Conclusions: In this study, we identified several important predictors for low birth weight e.g., duration of completed pregnancy in weeks, birth order, formal marital status at pregnancy outcome, age at time of conception, labor force status. This provided important information for social works and healthcare providers for early intervention. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for early detection. As to performance of these two models, logistic regression had a similar discriminating capability and a better calibration between predicted probability and observed probability.

Jingyuan Liu **GICICHLSR1716081**	**Identifying Suspect/Pathologic Fetal Heartbeat Using Artificial Neural Network** **Jingyuan Liu** **Shanghai Foreign, Language School, Shanghai, China**

Abstract

Objective: Cardiotocography (CTG) is a technical means of recording the fetal heartbeat and theuterine contractions during pregnancy. The machine used to perform the monitoring is called a cardiotocograph, more commonly known as an electronic fetal monitor (EFM). This study aims to build a model to identify suspect/pathologic CTG using artificial neural network and compare its performance to logistic regression model.

Methods:

A public data was used https://archive.ics.uci.edu/ml/datasets/Cardiotocography. A total of 1950 fetal CTGs were automatically processed and the respective diagnostic features measured. The CTGs were also classified by three expert obstetricians and a consensus classification label assigned to each of them. Classification was with respect to a fetal state (Normal=0; Pathologic=1).

All the records who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of Suspect/Pathologic fetal heartbeat in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.

Results: About 15.1% (n=295) of 1950 records were considered as suspect/pathologic.

According to the logistic regression, FHR baseline, number of accelerations per second, number of fetal movements per second, number of uterine contractions per second were significant predictors of suspect/pathologic CTG. So were number of prolonged decelerations per second, percentage of time with abnormal short term variability, percentage of time with abnormal long term variability, width of FHR histogram, minimum of FHR histogram, number of histogram peaks, histogram mode , minimum of FHR histogram, and histogram variance.

According to this neural network, the top 5 most important predictors were number of accelerations per second, number of prolonged decelerations per second, number of fetal movements per second , histogram variance and number of histogram zeros.

For training sample, the ROC was 0.96 for the Logistic regression and 0.98 for the artificial neural network. Artificial neural network performed better clearly. However in testing sample, the ROC was 0.96 for the Logistic regression and 0.95 for the artificial neural network. Artificial neural network had slightly worse performance.

As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.

Conclusions: In this study, we identified several important predictors for suspect/pathologic CTG e.g., number of accelerations per second, number of prolonged decelerations per second, number of fetal movements per second , histogram variance and number of histogram zeros. We built a model using artificial neural network as well as logistic regression to provide a tool for automatic analysis and identification of suspect/pathologic CTGs. As to performance of these two models, logistic regression had a similar discriminating capability and a better calibration between predicted probability and observed probability.

Nareman Aly **GICICHLSR1716083**	**The Effect of Emotional Intelligence Enhancement Program on Suicidal ideation among Attempted Suicide Adolescents** **Nareman Aly Mohamed**

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Abstract
Emotional intelligence has a great impact on mental health. The present study aims at evaluating the effect of emotional intelligence enhancement program on suicidal ideation among attempted suicide adolescents. Quasi- experimental research design "pre-post test" was used. Convenient sample was selected consisted of 36 suicidal adolescents; recruited from Poison Control Center, Cairo University. Data were collected through using five tools namely the socio demographic sheet, Beck Depression Inventory BDI-II, Barchard emotional intelligence scales, Beck Suicidal Ideation Scale, Life Stressors questionnaire. Results revealed that the family problems were the most prominent stressful life events. Half of participants had previous suicide attempts. There is positive correlation between depression and suicidal ideation, while no significant correlation between emotional intelligence and either suicide ideation or depression. In conclusion, the emotional intelligence enhancement program was particularly effective in improving depression, suicidal ideation and total score of emotional intelligence. Therefore, it is recommended that an emotional intelligence enhancement programs should be implemented as preventive measure at secondary schools, screening for measuring the emotional intelligence of students should be conducted, counseling centers should be established at all schools.
Keywords: emotional intelligence, suicide, depression, adolescents.

Hanson Zhang **GICICHLSR1716084**	**Predicting Risk of Stroke using Artificial Neural Network and Logistic Regressioin in Big Health Data** **Hanson Zhang** **No Department, High School: McCallie, Chattanooga** **Abstract** **Objective: This study aims to 1) examine the predictors of stroke 2) build a predictive model for risk of stroke using artificial neural network and compare its performance to logistic regression model.** **Data and Methods: National Health and Nutrition Examination Survey (NHANES) 2013-2014 data was used in this study. NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States.** **All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of stroke in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.** **Results:** **About 4.55% of 2437 participants experienced stroke, about 5.01% among the female and 4.12% among the male.**

	According to the logistic regression, the likelihood of being a victim of stroke increased when the participants aged. The risk of stroke decreased as the household income increased. High blood pressure diagnosis, and diabetes diagnosis were associated with higher risk for stroke. Patients with close relative had heart attack had increased risk for stroke. Non-smoker had lower risk for stroke.
	According to this neural network, the top 5 most important predictors were alq120q (How often drink alcohol over past 12 mos), race, bpq080 (Doctor told you - high cholesterol level), marriage status, and smq020 (Smoked at least 100 cigarettes in life).
	For training sample, the ROC was 0.84 for the Logistic regression and 0.87 for the artificial neural network. Artificial neural network performed better clearly. Meanwhile in testing sample, the ROC was 0.74 for the Logistic regression and 0.72 for the artificial neural network. Artificial neural network had worse performance.
	As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.
	Conclusions: In this study, we identified several important predictors for being a victim of stroke e.g., high blood pressure, diabetes, alcohol use in the past 12-months, family history of heart attack. This provided important information for patients and physicians to provide timely care for prevention. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for early detection. As to performance of these two models, logistic regression had a similar discriminating capability as well as a better calibration between predicted probability and observed probability.
Elizaveta S. Prokofyeva **GICICHLSR1716085**	**Modeling the Demand for Local Healthcare Services Using Big Data Techniques** **Elizaveta S. Prokofyeva** **Doctoral Student, Department of Innovation and Business in Information Technologies National Research University Higher School of Economics** **Moscow, Russian Federation** **Svetlana V. Maltseva** **Head of Department of Innovation and Business in Information Technologies, School of Business Informatics, Faculty of Business and Management** **National Research University Higher School of Economics** **Moscow, Russian Federation** **Abstract** **Patient flow modeling in healthcare plays a large role in understanding the operation of the system and its characteristics. Besides, modeling techniques can significantly improve the effectiveness level of the medical facility. The essence of the model improvement in this context is to take into account the peculiarities of local policlinics, the seasonality demand for medical care and other significant factors. The model will allow users to get some output forecast values, which subsequently can serve as a starting point for decision-making by the stakeholders. This paper is dedicated to big data analytics description in local polyclinics. The research showed that there are successful projects in this study area, nevertheless, some important issues still remain unclear, for instance, standards establishments in various data sources. The present study attempts to propose analytical scenarios for future model development. The experiment results in R language show that the first model iteration provides some valuable forecasted values. This study is aimed at future mathematical model development in order to enhance healthcare performance in local medical facilities to bring better level of service

	experience. Keywords— big data; analysis; medicine; polyclinics; healthcare
Jimmy Xu **GICICHLSR1716088**	**Predicting Breast Cancer using Artificial Neural Network and Logistic Regression** **Jimmy Xu** **Affiliation: Ivy Analytics LLC, New York, United States** **Abstract** **Objective: This study aims to build a predictive model for breast cancer using artificial neural network and compare its performance to logistic regression model.** **Methods: Wisconsin Diagnostic Breast Cancer (WDBC) data was used in this study. Features were computed from a digitized image of a fine needle aspirate (FNA) of a breast mass. They described characteristics of the cell nuclei present in the image.** **All the participants who were eligible were randomly assigned into 2 groups: training sample and testing sample. Two models were built using training sample: artificial neural network and logistic regression. We used these two models to predict the risk of breast cancer in the testing sample. Receiver operating characteristic (ROC) were calculated and compared for these two models for their discrimination capability and a curve using predicted probability versus observed probability were plotted to demonstrate the calibration measure for these two models.** **Results: A total of 569 patients were included in this analysis, 357 (62.74%) benign, 212 (37.26%) malignant breast cancer patients.** **According to the logistic regression, number of concave portions of the contour and texture (standard deviation of gray-scale values) were at important predictors for malignant breast cancer.** **According to this neural network, the top 5 most important predictors were worst area, mean of severity of concave portions of the contour, worst of severity of concave portions of the contour, worst of symmetry, worst of compactness.** **For training sample, the ROC was 1.0 for the Logistic regression and 1.0 for the artificial neural network. Artificial neural network performed better clearly. While in testing sample, the ROC was 0.92 for the Logistic regression and 0.99 for the artificial neural network. Artificial neural network had better performance.** **As to calibration measure, predictions made by the neural network are (in general) less concentrated around the 45-degree line (a perfect alignment with the line would indicate an ideal perfect calibration) than those made by the Logistic model.** **Conclusions: In this study, we identified several important predictors for breast cancer e.g., number of concave portions of the contour, worst of symmetry, worst of compactness. This provided important information for providers and patients for timely accurate diagnosis. We built a predictive model using artificial neural network as well as logistic regression to provide a tool for timely accurate diagnosis. When compared to artificial neural network model, logistic regression had a worse discriminating capability and a better calibration between predicted probability and observed probability.**
Vani Aggarwal **GICICHLSR1716090**	**Accomplish 2030 Health Agenda through Mobile Services: Indian Scenario** **Vani Aggarwal** **Amity School of Economics,Amity University, Gurgaon, India,India** **Dr. Meenal Sharma Jagtap** **Amity School of Economics,Amity University, Gurgaon, India,India**

Abstract

Despite a significant progress on Millennium Development Goals (MDGs 4&5), mortality of children under age of five years is still high and women die during their pregnancy. The unfinished targets are included in the Sustainable Development Health Goal (SDG3) to reduce child and maternal mortality globally. This study is focused on the impact of new technologies specifically mobile applications on the healthcare services. The simple regression model is used to quantify the relation between mHealth and mortality (child and maternal). Using regression analysis on a dataset of Indian economy covering the period from 1997 to 2014, this paper provides econometric evidence that child & maternal mortality relates to mobile subscribers, health expenditure, public health expenditure, improved sanitation facilities, female education and female labour force.

The results imply that mobile phone has a statistically significant favorable impact on both child mortality (IMR, U5MR & NMR) and maternal mortality; in contrast the estimated coefficients on internet users are almost insignificant. The insignificance of internet may return to the low internet penetration and lack of access. This outcome can benefit the policymakers in designing policies aiming to reduce child and maternal mortality in a developing country like India. The pilot studies such as Kilkari, mSakhi, Mobile Academy in India proves the significance of the mobile phone with respect to child/maternal mortality reduction.

There is a need to tap the potential market of mHealth services for healthcare deliveries in India to make affordable access of medical services and health information on safe pregnancy, child nutrition & saftey. Government should take bold initiatives to implement these services at reasonable rates and improve infrastructure facilities to facilitate mobile services in each and every corner of India.

Keywords: mHealth, Child Mortality, Maternal Mortality, Regression

Kamakshaiah Kolli GICICHLSR1716091	**A Comparative Study on Gene Functional Analysis Based on Gene Relations** **Kamakshaiah Kolli** **Assistant Professor, Department of CSE, VNR VJIET, Hyderabad, Telangana, India** **Suresh Ch** **Assistant Professor, Department of CSE, VNR VJIET, Hyderabad, Telangana, India** **Anjan Babu G** **Professor, Department of Computer Science, Sri Venkateswara University, Tirupati, India** **Abstract** In biomedical technologies, Gene functional analysis is an emerging concept in understands the DNA sequence and gene product analysis and gene interaction in different real time medical applications. Finding data sequences of gene functionalities. There are many techniques have been used to progress the functionality of genome analysis. This paper presents the algorithmic, calculation oriented and mathematical comparison under analysis of genome. We develop techniques for dynamic and automatic calculation of Genome relations; these relations are enabled in automatic identification of orthodox for Genome from redundant Genes in yeast Genome. We present a method to identify automatic protein to protein interaction Based on related patterns related to specific presentations, we observe understand frame of functional proteins were developed to find Gene identification with accurate and reliable formations like sensitivity & specificity. We also present methods for systematic "denovo" identification of motifs. The techniques do not depend on

previous information of gene operate and in that way stand out from the present literary works on computational design finding. Based on the genome-wide preservation styles of known elements, we designed three preservation requirements that we used to discover novel motifs. Our comparative results give comparative genomic to process our outstanding of any pieces. Our proposed techniques are flexible to verify comprehensive data genes and provide reliable research on complicated genomes on human specifications.

KeywordsGenome Correspondence, Gene Functional Analysis, Gene Expression, Protein-to-protein interaction, Gene Identification, Gene sequence extraction.

Domestic violence as a predicting factor for repeat suicide attempt among both victim and batterer

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Hao-Ren Cheng
GICICHLSR1716052

Abstract
The strong correlation between domestic violence and suicide has been verified in numerous studies. However, these studies have not differentiated among batterers, or victim in establishing the predictability of domestic violence for repeated suicidal behaviours. The objective of this study was to analyse the correlation between domestic violence populations and repeated suicide attempts by using secondary data analysis.

Methodology Methods
 This research dataset combined data from the Suicide Alerting and Reporting System of the Ministry of Health and Welfare from one city in Taiwan (one million and eighty thousands people in metropolitan area of southern Taiwan) and the National Domestic Violence database. Research targets were reported cases of attempted suicide during a 4-year period between 2011 and 2014. Total 6939 cases in including in the analyses. Of these, 388 involved repeat attempters.

Results
Regression analysis showed that a history of mental illness (odds ratios [ORs] ranged from 2.848 to 9.83), female (OR = 1.514), and history of domestic violence (ORs for batterer only, victim only, and mixed type were 2.62, 2.18, and 4.91, respectively) were risk factors for repeated suicide attempts. These results provide evidence suggesting that both batterers and victims are high-risk populations for repeated suicide attempts. Within the population of subjects without a history of mental illness, domestic violence was a strong predictor of repeated suicide attempts (ORs = 2.53, 2.86, and 7.84).

Conclusion
This provides evidence that suicide patients with a history of domestic violence require timely and aggressive intervention for suicide prevention.

Keywords: PubMed Health; batterer; domestic violence; repeat suicide; risk factors

Development of a Program on Responsible Use of Antimicrobials for the University of Makati

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University Of Makati, College Of Allied Health Studies, Center Of, Pharmacy, Phillipines

Abstract

Tumaca Ruel III R

YRSICHLSR1716051	Antimicrobial resistance has been considered as a global and national issue. The use and misuse of antimicrobial drugs accelerates the emergence of drug-resistant strains, and with its continuing emergence several actions are being promoted by different organizations. It is highly important for it to be given attention, which is why the researchers aimed to develop a program for the University of Makati regarding responsible use of antimicrobials through an assessment of the knowledge, attitude, practice and perception (KAPP) of students and employees, towards antimicrobial usage and antimicrobial resistance. This study utilized a quantitative method particularly survey and action research wherein an adopted survey questionnaire from Huang et al (2013) was administered to 610 respondents from the University of Makati comprising of 390 students from 12 different colleges and 220 employees from the academic and administrative clusters. The mean scores of the respondents under Knowledge, Attitude, Practice and Perception (KAPP) questions were calculated using Microsoft Excel as a statistical tool. Also, an item analysis was performed to determine the percentage of correct responses per item in order to fully understand their apparent needs and thus implement an appropriate program consisting of different activities such as distribution of informative pamphlets, public lecture and film showing of audiovisual presentations, all containing necessary information regarding antimicrobial agents and its usage, how resistance occurs and ways on how it can be prevented. The calculated mean KAPP scores of selected employees (15.24/25, 8.94/12, 39.92/60, 11.04/17) regarding antimicrobial usage and antimicrobial resistance is higher as compared to the mean KAPP scores of students (13.95/25, 7.01/12, 38.18/60 and 9.5/17). The researchers have also identified certain items where both of the group of respondents, employees and students, got a low score and those are Knowledge questions 3
Preyesh Stephen **YRSICHLSR1716052**	**Identification of lead molecules targeting MTase of Zika Virus** **Preyesh Stephen** **Axe Molecular Endocrinology and Nephrology, CHU Research Center and Laval University, Québec, Canada** Zika virus (ZIKV) is an emerging mosquito-borne virus recently linked to intrauterine growth restriction including abnormal fetal brain development. The recent outbreak of ZIKV reached pandemic level resulting in an alarming public health emergency. At present there is limited understanding of the infectious mechanism and no approved therapy. Nonstructural protein 5 (NS5) is essential for capping and replication of viral RNA and comprises a methyltransferase (MTase) and RNA dependent RNA polymerase (RdRp) domain. Here we used molecular modeling to obtain the structure of ZIKV MTase and molecular docking to identify the additional hydrophobic region uniquely conserved in flavivirus MTase that can be used as a druggable site. Subsequently, a virtual screening with a library of 28,341 compounds identified 10 best hits showing decisive contacts with the MTase. In vitro efficacy analysis of these compounds against a ZIKV, by plaque reduction assay (PRA), has confirmed four of the top scored ligands (Life Chemical ID: F3043-0013, F0922-0796, F1609-0442, and F1750-0048) having EC50 (50% effective concentration) values of 4.8 ± 2.3, 12.5 ± 7.4, 17.5 ± 8.4, and 17.6 ± 3.1 μM respectively, identifying lead compounds for anti-ZIKV drug development.

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