Joint Event on



Global Summit on

IMMUNOLOGY AND CELL BIOLOGY

Global Congress on

BACTERIOLOGY AND INFECTIOUS DISEASES

June 25-26, 2018 | Amsterdam, Netherlands

DAY 1

Scientific Tracks & Abstracts

Day 1 SESSIONS

June 25, 2018

Innate Immunity | Infectious Diseases | Immunological Disorders | HIV/Sexually Transmitted Diseases | Auto Immune Diseases

Session Introduction



Session Chair Khadija Rafiq Thomas Jefferson University, USA

Session Co-chair Hiroshi Ohrui Yokohama University of Pharmacy, Japan Title: Site attachment inhibition therapeutics: Dealing with association and causation issues

Simon Raymond, Alumnus Melbourne University, Australia

Title: The role of B cells in diabetic cardiomyopathy

Khadija Rafiq, Thomas Jefferson University, USA

Title: Analysis of the role of genetic polymorphisms of innate immune signaling

factors in inflammatory disease

Kaarthikeyan G, Saveetha dental college, India

Title: A cluster-randomized controlled trial to decrease hand, foot and mouth diseases in chinese kindergartens: The "Clean hands, happy life" program

Xiaona Liua, University Medical Center Rotterdam, Netherlands

Title: Detection and susceptibility pattern of biofilm-producing pseudomonas

aeruginosa isolated from clinical and environmental samples

Muhammad Sadeqi Nezhad, Islamic Azad University, Iran



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Simon Raymond, Virol Res J 2018, Volume 2

SITE ATTACHMENT INHIBITION THERAPEUTICS: DEALING WITH **ASSOCIATION AND CAUSATION ISSUES**

Simon Raymond

Alumnus Melbourne University, Australia

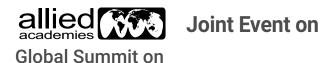
his talk highlights that site attachment inhibition (therapeutics involving the negation of cellular attachment, or entry/transfer, by the pathogen) is intended to consist of both: Treatment of established infections; and new generation immunization programs (preventative treatment). New generation immunization programs, based on prenatal stem cell therapy in the prenatal period and earlier spanning back to spermatogenesis and oogenesis, is intended to involve gene mutagenesis and knockout. Validation for likely success includes inherited mutations mentioned in the references noted that provide resultant resistance (immunity) to the stated infections including HIV and Malaria. Association and causation issues need to be dealt with given that even the known CCR5 mutation has not been completely confirmed as direct/ causative of the resultant resistance/immunity. A discussion with regards to prenatal and germline stem cell therapy, in addition to CRISPR and CRISPR-Cas9 is presented in the below link to the US NIH library. It is not up to date with "site attachment inhibition" therapeutics, however it does provide a general discussion on the above stated topics broadly. In brief, using technologies including those above would allow comparison between cells in which entry of the pathogen is occurring to those in which entry of the pathogen is not occurring (or, not able to) and through analysis of the genetics of the human cellular biology used by the pathogen to gain cellular attachment (or, transfer and entry), the genes to be targeted in mutagenesis and knockout can be analysed. NB: The pathogen machinery also is to be analysed. In summary, this presentation presents new content with regards to site attachment inhibition therapeutics. Site attachment inhibition therapeutics is intended to be applicable to all infections broadly. The next conference presentations will cover issues surrounding antimicrobial resistance.

BIOGRAPHY

Simon Raymond is a Consultant who specialised in Medical and Scientific Research and an Alumnus of Melbourne University (Rank of Number 1 in Australia and Number 33 in the World). He has worked as a Reviewer for the respected Medical Journal of Australia, has received invitations internationally to review from prestigious medical journals including Journal of American Medical Association network. He has received award in recognition of his research by Royal Australasian College of Surgeons (PSC, 2006) and invited to conferences internationally as an official Delegate and Researcher, including that in USA and China. He has worked as the Principle Researcher in the highest-powered form of medical trial—Randomised Controlled Trial (RCT). He is also a Member of the Golden Key International Society for honoured and outstanding academics and has been cited as a notable global leader.

simonraymondcontact@gmail.com





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Khadija Rafiq et al., Virol Res J 2018, Volume 2

THE ROLE OF B CELLS IN DIABETIC CARDIOMYOPATHY

Khadija Rafiq and Amrita Sarkar

Thomas Jefferson University, USA

liabetic cardiomyopathy (DCM) is typified by alterations in cardiac morphology and function, independent of hypertension or coronary disease. The disease is characterized by intramyocardial inflammation, cardiomyocytes apoptosis and cardiac fibrosis. The molecular mechanism that links inflammation to DCM is incompletely understood. This study investigates the role of B cells on the development of DCM. Induction of diabetes in WT mice resulted a significant decrease in B cell infiltration into the left ventricular heart, but not in other organs, during the development of DCM. Interestingly, decreased B cell numbers correlate with the downregulation of the expression of a B cell inflammatory molecule, Allograft Inflammatory Factor-1(AIF-1), which has been reported to enhance lymphocyte activation. However, the molecular mechanism(s) responsible for the decrease of B cell homing and AIF-1 expression in diabetic hearts as well as their relationship during the development of DCM is unknown. Focused on gaining insight into the role of AIF-1 in B cell migration, our in vitro study showed that B cell migration to cardiomyocytes is regulated by AIF-1 expression. We observed significant migration of B cells to hyperglycemic GFP-tagged AIF-1 transfected H9C2 cells compared to control cells transfected with an empty vector. Interestingly, Adenovirus AIF-1 overexpression promoted B cell homing to diabetic heart tissues, reduced inflammation and pathological remodeling. These effects of AIF-1 overexpression on the diabetes-induced cardiac dilatation and function are independent of AIF-1 effects on hyperglycemia since blood glucose levels are similar in diabetic WT mice with or without AIF-1 overexpression. This study suggests that diabetes attenuates AIF-1 expression, and this in turn, prevents B cell homing to diabetic heart tissues which in trun results in an increase of cardiac inflammation that leads to DCM.

BIOGRAPHY

Khadija Rafiq has her expertise in Immunology and Cellular Biology. Over the past several years she has been investigating how the immune system affects cardiac myocyte growth and cardiac function with a focus on signaling molecules that are activated by inflammatory proteases. Her research interest focuses on elucidating the role of inflammatory serine proteases in the development of diabetic cardiomyopathy. It is well known that inflammation plays a role in the development of diabetic cardiomyopathy. The goals of her research are to identify novel signaling mechanisms that control cardiac cell growth and apoptosis.

Khadija.rafiq@jefferson.edu





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Gurumoorthy Kaarthikeyan, Virol Res J 2018, Volume 2

ANALYSIS OF THE ROLE OF GENETIC **POLYMORPHISMS OF INNATE IMMUNE SIGNALING FACTORS IN** INFLAMMATORY DISEASE

Gurumoorthy Kaarthikeyan

Saveetha Dental College, India

Periodontitis is a chronic inflammatory disease of multifactorial etiology. The gram negative anaerobes are the main etiological agents in causing periodontal destruction. The genetic risk factors plays a major role in determining the susceptibility to periodontal disease. The virulence factors of these anaerobes like lipopolysacharide (LPS) are screened by the pattern recognition receptors like Toll like receptors and innate immune signaling cascade is activated. This signaling cascade is regulated by many microRNAs like miR146a. This microRNA146a negatively regulates TLR4 pathway by blocking interleukin 1 receptor associated kinase (IRAK1), TNFreceptor associated factor (TRAF6). This miR146a is in turn regulated by apolipoprotein E(apoE). ApoE is a major cholesterol carrier and plays an important role in maintaining lipid homeostasis. ApoE selectively regulates TLR4- and TLR3-mediated signaling. The apoE may suppress the Th1 immune response by modulating IL-12 production. The inactive pro inflammatory cytokine IL-1beta secreted by this signaling cascade is activated by Nod like receptors called NLRP3 in cytoplasm. The genetic changes of these signaling and regulatory factors of innate immune system might determine the susceptibility to periodontal destruction. Thus the aim of this study was to determine the association of the genetic polymorphisms of miR146a, apoE and NLRP3 with periodontitis in south Indian population. The study was approved by the institutional ethics committee of Saveetha university (017/10/2013/IEC/SU). The study included three groups- chronic periodontitis group (n=81), aggressive periodontitis group (n=80) and healthy controls (n=167). After getting informed consent, five ml of venous blood was collected by veinpuncture. DNA extraction was done according to modified Millers et al technique. The gene polymorphisms of miR146a (rs2910164), NLRP3(rs10802501, rs10754558), apoE was analyzed using specific primers in real time PCR.

Conclusion: Thus our study concludes that the allelic frequency of NLRP3(rs 10802501), miR146a (rs 2910164) and apoE polymorphisms were associated with periodontitis in south Indian population. The biological plausibility of this association has to be analysed with further studies.

BIOGRAPHY

Gurumoorthy Kaarthikeyan is working at Saveetha Dental College since 2007. He is currently holding the designation as Professor and Clinic Head (UG) of the Department of Periodontics. He is the Co-ordinator for implant approval committee and he is the Member of Scientific Review Board -Saveetha University. He has 37 publications in various international and indexed journals. He has delivered quest lectures at various national and international conferences. He is a Reviewer and Editorial Board Member in various journals.

drkarthik79@yahoo.co.in



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Xiaona Liu, Virol Res J 2018, Volume 2

A CLUSTER-RANDOMIZED **CONTROLLED TRIAL TO DECREASE** HAND, FOOT AND MOUTH DISEASES IN CHINESE KINDERGARTENS: THE **CLEAN HANDS, HAPPY LIFE PROGRAM**

Xiaona Liu

University Medical Center Rotterdam, Netherlands

Objectives: To evaluate the effect of the clean hands, happy life intervention on the incidence of hand, food and mouth disease (HFMD) and on school absences due to sickness in kindergarten students.

Methods: The intervention consisted of four hand hygiene (HH) promotion components and was evaluated in a cluster-randomized controlled trial among 8275 children and 18 kindergartens from May to October, 2015 in Shenzhen, China. We compared two intervention arms - received the intervention in kindergartens only and in both kindergartens and families, respectively - to the control arm that continued usual practice.

Results: During the follow-up, the incidence of HFMD in both intervention arms was significantly lower than in the control arm (IRR1: 0.40, 95% CI: 0.26-0.62; IRR2: 0.35, 95% CI: 0.22-0.57); the duration of absence due to sickness in both intervention arms was significantly shorter than in the control arm $(\beta 1=0.58, 95\% \text{ CI: } 0.41-0.74; \beta 2=0.34, 95\% \text{ CI: } 0.17-0.50)$, controlling for the area type of kindergarten and grade level of children. Furthermore, during the follow-up we found that there were fewer episodes of absence due to respiratory, skin and eye infections (P<0.05).

Conclusions: Our intervention is effective at reducing HFMD infections and absence due to sickness in children attending kindergartens in China.

BIOGRAPHY

Xiaona Liu is a Postdoc Researcher at the Department of Public Health, University Medical Center in the Netherlands. She holds two research master degrees and one doctoral degree in Public Health and Infectious Disease Control. She is specialized in the development and evaluation of public health interventions for preventing diseases (both communicable and non-communicable), combing with strong interests in behavioral change techniques, health psychology, and implementing research findings into practice. Her work currently involves Dutch-China joint research on hand hygiene improvement, as well as evaluation of the implementation of preventive programs at different clinical wards of the Erasmus Hospital in Rotterdam, the Netherlands.

x.liu@erasmusmc.nl





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Muhammad Sadegi Nezhad, Virol Res J 2018, Volume 2

DETECTION AND SUSCEPTIBILITY PATTERN OF BIOFILM-PRODUCING PSEUDOMONAS AERUGINOSA AND **USING CRISPR/CAS SYSTEMS TO KNOCK-OUT BIOFILM-SPECIFIC ANTIBIOTIC RESISTANCE GENES**

Muhammad Sadeqi Nezhad

Islamic Azad University, Iran

Backgrounds: Biofilm plays an important role in chronic diseases and their eradication is very challengeable, when bacteria confront with antibiotics or strong immune system response they have the choice whether to be planktonic cells or form a biofilm, producing extra cell materials to enhance their survival. The aim of this study was the assessment of incidence and antibiotic algorithms of biofilm-producing Pseudomonas aeruginosa, an opportunistic pathogen and one of the most frequent causes of infectious disease in vulnerable patients.

Methods: A total of 100 P.aeruginosa isolates were collected from five different clinical specimens and wards of the fifth Azar Hospital, Gorgan, Iran during November 2017. However, after isolating of samples under sterilized conditions, these strains have been identified as a P.aeruginosa through appropriate biochemical procedures and their antibiotic patterns according to NCCLS disk methodology have been examined; afterward, ELISA method was employed for the detection of biofilm producing Paeruginosa.

Results: Out of 100 clinical isolated Paeruginosa 31(31%) of them were biofilm producer. The frequency of biofilm positive strains among specimens have been observed; 56.2% from burned wounds, 36.4% from urines, 22.2% from respiratory secretions, 19.4% from blood cultures and 16.7% of the strains were biofilm positive from normal wound cultures (P=0129). Besides, 50% of biofilm-producing Paeruginosa were isolated in internal section followed by burned section (45.8%), ICU section (29.4%), surgical section (15.8%) and 9.2% in pediatric neurology section (P=0129). Furthermore, biofilm-producing Paeruginosa indicated impressive resistance patterns to piperacillin (49.2%), Imipenem (49.2%), ciprofloxacin (47.6%), gentamicin (46.7%), ticarcillin (44.1%), cefepime (38.9%), ceftazidime (34.9%), ceftriaxone (34.3%), cotrimoxazole (34.1%) and cefotaxime (31.6%) respectively.

Conclusions: This study demonstrated that there is a discrepancy in the outbreak of biofilm-producing Paeruginosa among various specimens and also the pattern of antibiotic susceptibility and resistance did not follow a specific algorithm.

BIOGRAPHY

Muhammad Sadeqi Nezhad is majoring in Clinical Laboratory Science (BSc), Gorgan Islamic Azad University. He is a passionate, research-driven student looking to possess diversity of knowledge and necessary skills at Oncology/Pathology in medical school to begin a career in clinical research to discover diagnostic methods and treatment.

Labmsn9@gmail.com

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DAY 2

Scientific Tracks & Abstracts

Day 2 SESSIONS

June 26, 2018

Virology | Tumor Immunology | Bacteriology | Fungus Infection and Parasites | Immunopathology and Immunodeficiencies | Rare and Neglected Tropical Diseases

Session Introduction



Session Chair Khadija Rafiq Thomas Jefferson University, USA

Session Co-chair Hiroshi Ohrui

Yokohama University of Pharmacy, Japan Title: Health equity in ICD11 borreliosis codes

Huib Kraaijeveld, On Lyme Foundation, Netherlands

Title: The intuitive rational-choice theory of madness: Schizophrenia, criminal insanity & neuroses

Yacov Rofé, Bar-Ilan University in Ramat Gan, Israel

Title: Targeting conserved broadly neutralizing epitopes within HIV-1 envelope

gp41 MPER as vaccine immunogens for sero-negative partners of HIV-1

discordant couples

Godwin W Nchinda, CIRCB, Nigeria

Title: Human c-Cbl and Cbl-b proteins are more highly expressed in the thymus

compared to the testis

Mazo KONE, University of Ibadan, Nigeria



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Huib Kraaijeveld, Virol Res J 2018, Volume 2

HEALTH EQUITY IN ICD11 BORRELIOSIS CODES

Huib Kraaijeveld

On Lyme Foundation, Netherlands

orreliosis infections are pandemic-these include relapsing fever and Lyme borreliosis LB. The WHO has recognized Lyme borreliosis as a multiregion 'disease of consequence' for decades. In August 2017, the European Centre for Disease Prevention and Control noted that LB is among the 30 most threatening diseases for public health (Decision 1082/2013/European Union). According to experts across key veterinary and medical institutions in West Africa, many in Africa depend on livestock for their livelihood and this exposes them to zoonotic borreliosis. Research has shown that many cases of what was assumed to be drug resistant malaria was borreliosis infection. In Australia, the lack of diagnostic tools for forms of relapsing fever borreliosis leaves thousands of patients without confirmation or access to medical care. Clinicians and researchers across the US, Canada, Eastern, Western and Northern Europe, the Asia Pacific and Africa have stated that WHO diagnostic codes for these infections need to be updated and surveillance needs to be improved. Until this happens, estimated millions of people will just suffer. Studies indicates costs to be in the millions for employers and billions for certain national economies. Based on the Centers for Disease Control and Prevention's conservative estimate of annual LB infection in the USA, their 2017 article on persistent infection and their 2006 study on the cost of Lyme disease, roughly 380,000 LB infections cost more the US more than 4.09 billion dollars annually. WHO diagnostic codes do not recognize many of the disabling conditions caused by these infections. Across the globe, medical systems use these codes to diagnose illness and determine treatments. The outdated codes result in very sick people being denied treatment -even when treatment options come from clinical practice guidelines that meet internationally accepted standards for guidelines. In addition to denial of care, there are attacks on medical professionals who are following these guidelines to treat chronic Lyme disease patients. The Lyme and relapsing fever borreliosis bacteria-spirochetes similar to syphilis-are known to evade immune response and form biofilms that are difficult to eradicate. Hundreds of peer reviewed publications describe serious physical conditions caused by the Lyme borreliosis infection. They include Lyme nephritis, hepatitis, aortic aneurysms, persistent infection, strokes, dementia, heart failure and congenital Lyme disease. The complications from syphilis are clearly listed and detailed in the WHO codes whereas most Lyme complications are not. From an ethical perspective, there is unjustifiable medical risk involved in continuing to obstruct access to medical care for patients that meet clinical diagnosis and those suffering from chronic LB and relapsing fever borreliosis. Medicine has many cases of scientific debate, for example, how best to treat certain cancers or autism. In all these cases, policy makers have a duty to proactively protect the right to health. In June 2017, an international team of scientists, medical professionals, human rights experts and patient advocates testified before the United Nations Special Rapporteur responsible for health and human rights regarding the human right violations experienced by Lyme and relapsing fever borreliosis patients.

BIOGRAPHY

Huib Kraaijeveld (MA) is trained as a social psychologist and educator. Since 2010 he has been researching and documenting the mistreatment of LB patients and its devastating social consequences to countless people and their children. He shares the stories and knowledge of both sufferers, solvers, investigators and influencers on the website of the On Lyme Foundation, as public education and input for both political actions and legal cases. He has authored the book 'Shifting the Lyme Paradigm' and is also a founding member of the 'Ad Hoc Committee for Health Equity in ICD11 Borreliosis Codes', an all-voluntary global multidisciplinary consortium of highly skilled professionals representing nations from five continents. Their efforts are already bringing more-informed political attention and pressure to correct the response to the Lyme pandemic.

hkraaijeveld@on-lyme.org



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Yacov Rofé, Virol Res J 2018, Volume 2

THE INTUITIVE RATIONAL-**CHOICE THEORY OF MADNESS:** SCHIZOPHRENIA, CRIMINAL INSANITY **& NEUROSES**

Yacov Rofé

Bar-Ilan University in Ramat Gan, Israel

he book, The Intuitive Rational-Choice Theory: Schizophrenia, Criminal Inanity & Neuroses, presents a new theory which explains the development and treatment of schizophrenia and criminal insanity as rational coping mechanisms. Based on the strong relationships between schizophrenia and neurological impairments, medical models took for granted that all cases of schizophrenia result from neurological impairments, even when there was no evidence, as in the case the Unabomber and John Nash. The new theory, termed also Psych-Bizarreness Theory, demonstrates that it can explain all cases of schizophrenia, regardless whether they suffer from neurological damages or not, as well as criminal insanity and neurotic disorders, by conscious-rational terms. According to the new theory, when individuals are confronted with extreme levels of stress, irrespective of whether the source of the stress is neurological or environmental, their behavioral options become limited: They can commit suicide, develop a drug abuse, use aggression to eliminate the stressor, or intuitively choose certain mad/bizarre behaviors diagnosed by five empirical criteria (Rofé, 2000, 2016), that suite their coping demands. Madness is seen primarily as a repressive coping mechanism, which individuals intuitively choose when confronted with unbearable levels of stress. Thus, contrary to psychoanalysis, madness cause repression rather than visa versa. The choice of a specific mad behavior is determined by the same three principles which guide the consumer's decision-making process when purchasing a certain product. The major principal is the need controllability: The specific mad behavior must increase the patient's ability to exercise control over the stressor and or provide certain desired privileges. The second guiding principle is availability: The choice of the specific symptom is affected by various channels of information, such as the media, personal experiences, genetic predispositions, family and peers that increase the saliency of certain suitable behaviors. The third principle is cost-benefit analysis: The mad behavior is chosen only if the individual intuitively feels that it will reduce the level of his or her emotional distress. Although the decision to implement the intuitive/unconscious choice is conscious, patients become unaware of the Knowledge of Self-Involvement (KSI) through a variety of cognitive processes that disrupt the encoding of this knowledge and a number of memory inhibiting mechanisms that cause its forgetfulness. Subsequently, utilizing their socially internalized beliefs regarding the causes of psychological disorders, patients develop a self-deceptive belief which attributes the cause of their symptoms to factors beyond their conscious control. The new theory proved its ability to integrate all therapeutic methods pertaining to neurosis into one theoretical framework (Rofé, 2010), explaining all data relevant to the development and treatment of conversion disorder, including neurological findings, which seemingly support the medical explanation of this disorder, and resolves the theoretical confusion regarding the explanation of phobia by distinguishing between bizarre (e.g., agoraphobia and chocolate phobia) and non-bizarre phobia, such as dog phobia. Robert Aumann, the Nobel Prize-winning economist, noted in a letter of recommendation to publishers of the present book (2017), Rofé's theory is as "revolutionary as it sounds, fits well into the frameworks of economics, game theory, and evolution".

BIOGRAPHY

Yacov Rofé is a professor of psychology and former chair of the Interdisciplinary Department of Social Sciences at Bar-Ilan University in Ramat Gan, Israel. He taught for the Department of Psychology at Washington University in St. Louis, Missouri, and was a visiting professor at Rutgers Medical School in New Jersey. He has published many articles in leading academic journals of psychology, including a theory entitled "Stress and Affiliation: a Utility Theory", published by Psychological Review in 1984. An additional influential article, published in Review of General Psychology, 2008, is a review that refutes the existence of repression and the Freudian Unconscious.

Jacov.Rofe@biu.ac.il



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Godwin W Nchinda, Virol Res J 2018, Volume 2

TARGETING CONSERVED BROADLY **NEUTRALIZING EPITOPES WITHIN HIV-**1 ENVELOPE GP41 MPER AS VACCINE **IMMUNOGENS FOR SERONEGATIVE** PARTNERS OF HIV-1 DISCORDANT **COUPLES**

Godwin W Nchinda

CIRCB, Nigeria

Background: The membrane proximal external region (MPER) of HIV-1 envelope glycoprotein-41 (gp41) is targeted by several broadly neutralizing antibodies whose conserved linear epitopes are promising targets for vaccine design. However, a formidable challenge has remained the difficulty to design and deliver MPER based immunogens for the efficient induction of such broadly neutralizing HIV-1 specific antibodies (bnAb). This is mainly because the linear bnAb MPER epitopes are poorly accessible to the immune system. The overall objective of this study therefore was the development and validation of an RNA coliphage QB display system for efficient presentation of conserved bnAb epitopes to the immune system

Method: To overcome the challenge of effective presentation of MPER to the immune system we have selectively engineered the surface of the RNA coliphage QB to to display a 51 aa consensus MPER peptide upon the surface of the phage particle. The expression cassettes were used for the production of QBMPER recombinant hybrid phages after transformation of E. coli HB101 strain.

Results: Specific recognition of all the linear MPER based bnAb epitopes were confirmed in ELISA with recombinant QBMPER phage as antigen and the bnAb 2F5, Z13, 4E10 and 10E8 as antibodies. Next the prevalence of MPER specific antibodies was determined in plasma from antiretroviral naïve HIV infected participants of the CIRCB AFRODEC cohort. The greater majority (84%) of participants' plasma showed MPER peptide specific reactivity with antibody titers ranging ranging from 200 to 409600 comparative to background values with Qβ empty as antigen.

Conclusion: Thus, this novel recombinant QβMPER phages can be used to monitor MPER- specific immune responses in clinical samples. In addition the recombinant QBMPER phage can be used as immunogens either alone or in combination with other strategies for the induction of MPER specific immunity against HIV-1.

BIOGRAPHY

Godwin W Nchinda is Senior Immunologist CIRCB and Deputy Director General Head of CIRCB Vaccinology Laboratory Head of CIRCB Biobanking Laboratory For the last twenty four years I have focused my attention to developing model vaccines that could be easily translated into clinics against infectious diseases and tumors. I studied Microbiology in the University of Calabar, Nigeria and then spent four years thereafter in the University of Nigeria, Nsukka, Nigeria working on an NIH Grant where we developed a feed based vaccine against Newcastle disease virus infections in free range Chickens. During my PhD thesis (1998-2001) I learned how to design and evaluate model SIV/HIV vaccines under the mentorship of K. Uberla, Professor of Molecular Virology in the University of Leipzig Germany.

nsehleseh@gmail.com



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Mazo Kone et al., Virol Res J 2018, Volume 2

HUMAN C-CBL AND CBL-B PROTEINS ARE MORE HIGHLY EXPRESSED IN THE THYMUS COMPARED TO THE TESTIS

Mazo Kone, Rachida Salah and Harir Noria

University of Ibadan, Nigeria

Background & Objectives: c-Cbl and Cbl-b are two members of the Cbl family proteins, with a crucial role of down regulation of tyrosine kinase receptors. They act as E3 ubiquitin ligases and are multivalent adaptor proteins, making them important in maintaining homeostasis in the body. This study investigated the expression level in thymus and testis in normal conditions.

Methods: The expression level was assessed by immunochemistry of tissue microarrays of normal thymus and testis biopsies.

Results: Cbl-b and c-Cbl proteins were found to be highly expressed in normal testis and thymus, indicated as yellowish brown granules in the cyto-membrane and cytoplasm compared to controls. The c-Cbl appears to be more highly expressed than the Cbl-b in the thymus, while c-Cbl appears slightly stronger than Cbl-b in the testis. The thymus was found with a higher grade compared to the testis.

Conclusion: In this work we concluded, that in normal condition, thymus tissue expresses more Cbl family proteins (c-Cbl and Cbl-b) than the testis tissue in humans.

BIOGRAPHY

Mazo Kone has initiated to the world of research during both his Bachelor and Master. Time during which, he received basics training in Biology of Cancer, Physio-Pathology of Metabolic diseases, Infectious diseases and many more. However he quickly developed an interest for the molecular biology of cancer, physiology of the cell and infectious diseases. He has worked on the oncogenic properties of human c-Cbl and Cbl-b as master project work. Currently, he is doing his PhD in Cell Biology and Genetics at the University of Ibadan in Nigeria. His research is on congenital infections in pregnancy both in Mali and Nigeria. In general his research works are axed on molecular biology of cancer and infectious diseases. He is the Leader of Rachetes Algeria since 2012, the promoter and the Manager of the biomedical researcher project.

mzoalger@yahoo.fr

