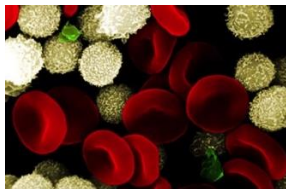


Chlorinated Lipid Proved to Have Potential to Act as Biomarker for Sepsis

Sepsis is a life-threatening condition that can occur whenever the body is invaded with a severe infection. In this condition immune response is triggered leading to a cascade of chemical reactions, the ultimate result of which can be decreased blood pressure, vital organ failure and death. The devastating effects of this condition can be somewhat controlled if diagnosed at the right time and treated with antibiotics and intravenous fluids. However, diagnosis of this complication is tough since there are no direct ways of diagnosing this condition. Recently, a team of researcher from St. Louis University identified a possible biomarker that can be used in the diagnosis of sepsis:



chlorinated lipids having undergone “bleached” action. When inflammation occurs, oxidants are released from immune cells in large quantity and one of these oxidants is cellular bleach. Invading micro-organisms are bleached and thus rendered harmless or killed by these oxidants. However, sometimes cell components, mainly lipids are also bleached leading to the formation of chlorinated lipids.

The team of researchers also found that these chlorinated lipids are only produced whenever there is inflammation or infection, showing their capacity to be used as biomarker for sepsis. The team is currently conducting research to develop a proper biomarker using these chlorinated lipids. However, there is controversy in the field about reliability and specificity of biomarkers for such diagnostic purposes.

–Nausheen Sayeara

<http://labroots.com/trending/id/2050/bleached-lipids-as-new-biomarkers-for-sepsis/clinical-and-molecular-dx>

Bayer and CRISPR Therapeutics AG join Forces to Discover, Develop and Commercialize Potential Cures for Serious Genetic Diseases

Bayer and CRISPR Therapeutics have recently entered into an agreement to create a joint venture (JV) to discover, develop and commercialize new breakthrough therapeutics to cure blood disorders, blindness, and congenital heart disease. CRISPR Therapeutics will contribute its proprietary CRISPR-Cas9 gene-editing technology and intellectual property, while Bayer will make available its protein engineering expertise and relevant disease know-how. It is the first long-term strategic partnership of its kind to make a substantial investment in the development of target delivery systems in an effort to bring systemic in vivo CRISPR-Cas9 gene editing technology applications to patients. Bayer will provide a minimum of USD 300 million in R&D investments to the JV over the next five years. In addition, Bayer will acquire a minority stake in CRISPR Therapeutics for USD 35 million in cash. Through the JV, Bayer may secure exclusive rights to use CRISPR Therapeutics’ and the JV’s proprietary CRISPR-Cas9 technology and intellectual property in the three targeted

disease areas, including blood disorders, blindness and congenital heart diseases. CRISPR Therapeutics may gain exclusive access to Bayer’s protein engineering know how for use in CRISPR products as well as Bayer’s extensive expertise and knowledge in the three targeted disease areas.

Newly created know-how from the collaboration around the CRISPR-Cas9 system beyond the three disease areas, will be exclusively made available to CRISPR Therapeutics for human use, and to Bayer for non-human use, such as agricultural applications. All technology development and future IP developed by the JV will also be exclusively available to the parent companies Bayer and CRISPR Therapeutics.

–Fabiha Tasnim

<http://www.press.bayer.com/baynews/baynews.nsf/id/2015-0425-e>



Pharmacoeconomics

Parmacoeconomics refers to the scientific discipline that compares the value of one pharmaceutical drug or drug therapy to another. It is a sub-discipline of health economics. Pharmacoeconomics identifies, measures, and



compares the costs and consequences of drug therapy to healthcare systems and society. Pharmacoeconomic studies serve to guide optimal healthcare resource allocation, in a

standardized and scientifically grounded manner. The perspective of a pharmacoeconomic evaluation is paramount because the study results will be highly dependent on the perspective selected. Healthcare costs can be categorized as direct medical, direct nonmedical, indirect nonmedical, intangible, opportunity, and incremental costs. Economic, humanistic, and clinical outcomes should be considered and valued using pharmacoeconomic methods, to inform local decision making whenever possible.

To compare various healthcare choices, economic valuation methods are used, including cost-minimization, cost-benefit, cost-effectiveness, and cost-utility analyses. These methods all provide the means to compare competing treatment options and are similar in the way they measure costs (dollar units). They differ, however, in their measurement of outcomes and expression of results.

In today's healthcare settings, pharmacoeconomic methods can be applied for effective formulary management, individual patient treatment, medication policy determination, and resource allocation. When evaluating published pharmacoeconomic studies, the following factors should be considered: study objective, study perspective,

pharmacoeconomic method, study design, choice of interventions, costs and consequences, discounting, study results, sensitivity analysis, study conclusions, and sponsorship.

-Sauda Binte Sunjida

accesspharmacy.mhmedical.com/content.aspx?bookid=462§ionid=41100767#8015064

FDA Approved Drugs in 2015

Therapeutic Class	Generic Names of the Approved Drugs
Cardiology/Vascular	ivabradine, sacubitril and valsartan, sebelipase alfa, cangrelor, alirocumab, combination of perindopril arginine and amlodipine besylate, evolocumab, edoxaban, selixipag
Dermatology	secukinumab, cobimetinib, combination of calcipotriene and betamethasone dipropionate, talimogene laherparepvec, deoxycholic acid, sonidegib
Endocrinology	flibanserin, parathyroid hormone, combination of empagliflozin and metformin hydrochloride, insulin degludec injection
Gastroenterology	ceftazidime-avibactam, cholic acid, combination of trifluridine and tipiracil, irinotecan liposome injection, rolapitant, eluxadolone, rifaximin
Genetic	sebelipase alfa, asfotase alfa, uridine triacetate
Hematology	Daratumumab, panobinostat, parathyroid hormone, recombinant Factor VIII, idarucizumab, patiromer
Hepatology (Liver, Pancreatic, Gall Bladder)	cholic acid, daclatasvir, combination of ombitasvir and paritaprevir and ritonavir
Immunology	Secukinumab, tacrolimus extended-release, combination of atazanavir and cobicistat, combination of elvitegravir, cobicistat, emtricitabine and tenofovir alafenamide, darunavir and cobicistat
Musculoskeletal	Meloxicam
Nephrology	tacrolimus extended-release, lesinurad
Neurology	aripiprazole lauroxil, buprenorphine, combination of carbidopa and levodopa, combination of carbidopa and levodopa, meloxicam, cariprazine
Obstetrics/Gynecology	Flibanserin, palbociclib
Oncology	alectinib, cobimetinib, daratumumab, elotuzumab, panobinostat, palbociclib, talimogene laherparepvec, lenvatinib, trifluridine and tipiracil, ixazomib, sonidegib, irinotecan liposome injection, nivolumab, necitumumab, osimertinib, dinutuximab, rolapitant, trabectedin
Infections	ceftazidime-avibactam, Meningococcal Group B Vaccine, isavuconazonium sulfate, daclatasvir, combination of atazanavir and cobicistat, trivalent influenza vaccine, combination of elvitegravir, cobicistat, emtricitabine, and tenofovir alafenamide, combination of darunavir and cobicistat, combination of ombitasvir, paritaprevir and ritonavir
Orthopedics/Orthopedic Surgery	asfotase alfa
Otolaryngology (Ear, Nose, Throat)	ciprofloxacin otic suspension
Pediatrics/Neonatology	Meningococcal Group B Vaccine, cholic acid, sebelipase alfa, lumacaftor and ivacaftor, ciprofloxacin otic suspension, asfotase alfa, dinutuximab
Psychiatry/Psychology	aripiprazole lauroxil, brexpiprazole, cariprazine
Pulmonary/Respiratory Diseases	alectinib, mepolizumab, nivolumab, combination of lumacaftor and ivacaftor, necitumumab, combination of tiotropium bromide and olodaterol, osimertinib, indacaterol and glycopyrrate
Urology	ceftazidime-avibactam, uridine triacetate
Vaccines	Meningococcal Group B Vaccine

<http://www.centerwatch.com/drug-information/fda-approved-drugs/>

