राजस्थान सरकार
निदेशालय, चिकित्सा एवं स्वास्थ्य सेवायें, राजस्थान, जयपुर

क्रमांकः आई.डी.एस.पी / कोरोना / 2020 / [illegible]3 दिनांक 24/9/2020

निदेशक,
चिकित्सा शिक्षा, विभाग,
राजस्थान, जयपुर।

विषयः—कोरोना (COVID-19) रोग में Triclosan के उपयोग बाबत्।
सन्दर्भः—प्रमुख सचिव चिकित्सा एवं स्वास्थ्य विभाग कार्यालय का डायरी क्रमांक 2143 वीआईपी दिनांक 14.05.2020

उपरोक्त विषयान्तर्गत सन्दर्भित डायरी क्रमांक द्वारा निदेशक, वर्कस, बैंगलोर द्वारा भेजे गये ई—मेल को अग्रेषित किया गया है उक्त ई—मेल द्वारा Triclosan के गुणों का उल्लेख किया गया है तथा इस Molecule को Covid-19 की रोकथाम हेतु उपयोगी बताया है एवं इस संबंध में Literature भी प्रस्तुत किया है। उक्त पत्र में Triclosan के विषय में किसी Approved Agency से Clinical Trial कराने का सुझाव दिया गया है।

पत्र की प्रति मय संलग्नक संलग्न कर लेख है कि प्रकरण में आवश्यक कार्यवाही कर उच्चाधिकारियो को अवगत करवाते हुए प्रति अधोहस्ताक्षरकर्ता को भिवाजने का श्रम करें।

अति0 निदेशक (ग्रा0 स्वा0)
चिकित्सा एवं स्वास्थ्य सेवाएं,
राजस्थान, जयपुर।

क्रमांकः आई.डी.एस.पी / कोरोना / 2020 / दिनांकः

प्रतिलिपि निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित हैः—

1. निजी सचिव, संयुक्त सचिव (एस.ए.के.), मुख्यमंत्री कार्यालय, राजस्थान सरकार, जयपुर को उनके डायरी क्रमांक निल 20538 दिनांक 05.05.2020 के क्रम में।
2. निजी सचिव, प्रमुख शासन सचिव, चिकित्सा एवं स्वास्थ्य विभाग राजस्थान जयपुर को उनके डायरी क्रमांक 2143 वीआईपी दिनांक 14.05.2020 के क्रम में।
3. संयुक्त निदेशक, सीएमआईएस, निदेशालय मुख्यालय को उनकी अनोपचारिक टिप्पणी क्रमांक 875 दिनांक 19.08.2020 के क्रम में।
4. प्रभारी, सर्वर रूम को संबंधित को ई—मेल करने व वेबसाईट पर अपलोड करने वास्ते।
5. रक्षित पत्रावली।

अति0 निदेशक (ग्रा0 स्वा0)
चिकित्सा एवं स्वास्थ्य सेवाएं,
राजस्थान, जयपुर।

:: अनौपचारिक टिप्पणी ::

विषयः— मुख्यमंत्री कार्यालय से प्राप्त पत्रों के निस्तारण के संबंध में।

संदर्भः— आपकी अनौ0 क्रमांक आरपीजी/सीएमआईएस/सीएमओ/2020/501 दिनांक 15.05.2020, सयुंक्त सचिव,(एस0ए0के0) मुख्यमंत्री/राजस्थन सरकार जयपुर कार्यालय की डायरी क्रमांक 20538 दिनांक 05.05.2020 एवम् निजी सचिव अतिरिक्त मुख्य सचिव, चिकित्सा एवं स्वास्थ्य विभाग राज0 जयपुर कार्यालय की डाक संख्या 2143 (वीआईपी) दिनांक 14.05.2020, के संदर्भ में।

उपरोक्त विषयान्तर्गत संदर्भित पत्र क्रम के साथ सलंग्न—मेल दिनांक 01.05.2020 के क्रम में निवेदन है कि पत्र/मेल में Triclosan के गुणों का उल्लेख किया गया है तथा इस Molecule को Covid-19 की रोकथाम हेतु उपयोगी बताया है एवं इस सम्बंध में Literature भी प्रस्तुत किया है। उक्त पत्र में Triclosan के विषय मे किसी Approved Agency से Clinical Trial कराने का सुझाव दिया गया है पत्र औषधि नियंत्रण संगठन से सम्बधित नही है क्योंकि संगठन के स्तर से एसी कोई कार्यवाही नही की जाती है। पत्र को उचित कार्यवाही हेतु ICMR एंव CDSCO (DCGI Office) भिजवाया जाना प्रस्तावित है।

(राजा राम शर्मा)
औषधि नियंत्रक
राज0 जयपुर

निदेशक (जन स्वास्थ्य)
चिकित्सा एवं स्वास्थ्य सेवाये
राजस्थान, जयपुर।
क्रमांकः डीसी/डी—1/ आरपीजी/सीएमआईएस/सीएमओ /2020/558
दिनांकः— 30/05/2020

Email

Dak No. 2143 ...... Date 14/05/2020

pscm~rj@gov.in

TRICLOSAN - the Multidimensional molecules to curb COVID -19 menace --- For your perusal and advising authority for clinical trial based on details furnished

From : snsingh directorwork <snsingh_directorwork@kumarorganic.net>	Fri, May 01, 2020 01:52 PM
	2 attachments

Subject : TRICLOSAN - the Multidimensional molecules to curb COVID -19 menace --- For your perusal and advising authority for clinical trial based on details furnished

To : Nitish <cmbihar@nic.in>, Chief Minister AP <cm@ap.gov.in>, cm@karnataka.gov.in, CM DELHI <cmdelhi@nic.in>, cmsec@tn.gov.in, cmcell@tn.gov.in, CM Rajasthan <cmrajasthan@nic.in>, cm@karnataka.gov.in, Chief Minister AP <cm@ap.gov.in>, Sahabhag Maharashtra <sahabhag.maharashtra@gov.in>, JAIRam <jr.thakur@nic.in>, My Gov MP <mp.mygov@mp.gov.in>, Bhupesh Baghel <cmcg@gov.in>

Cc : cs@karnataka.gov.in, Kuldeep Ranka <pscm-rj@gov.in>, Dr.Poonam Malakondaiah I A S <prlsecy_agr@ap.gov.in>, chiefsecretary@gujarat.gov.in, chiefsecretary@gujarat.gov.in, Chief Secretary Bihar <cs-bihar@nic.in>, secy_cabsec <secy_cabsec@bihar.gov>

To

The Honab`ble Chief Minster of ALL States and Chef secretaries

Dear Sir

SUB:- **<u>TRICLOSAN - the Multidimensional molecules to curb COVID -19 menace---- For your perusal and advising authority for clinical trial</u>**

We trust and appreciate the ongoing efforts of whomsoever in the wake of COVID-19 and wish to join you and participate in this venture. This mail is to bring to your notice that we have a small window of opportunity to control this new emerging virus and to deal with this unprecedented threat to global health. As we are in the search of suitable virucidal agents to curb the menace, we wanted to propose to you to revisit the proven efficacies of the legendary antimicrobial molecule 'Triclosan' and employ the same against **SARS CoV-2.**and responding to the needs of our community during rapidly evolving set of unpredictable circumstances

The need of the (PANDEMIC) hour is to employ a suitable virucidal agent resist/inhibit/ kill SARS COVID-2 virus And data shows that Triclosan could be a potent candidate,

<u>Studies indicate that Triclosan is widely used in therapeutics , personal care and home care ,traverses its path from bench to bed side as appended below---</u>

- **Triclosan as a proven antimalarial drug**
- **Triclosan in surgical sutures:**
- **Triclosan for COVID-19 "Oral Hygiene**
- **Triclosan for COVID- 19 "Hand**
- **Surface Hygiene Formulae**
- **Triclosan for COVID-19 "Face masks"**

NOTE:----The scientific details of the same have been summarized in the attached write up for your perusal.

My appeal to all our Hobable`S CM OF EACH State to get clinical trial done with molecule to approved agency

For Further details , Pl contact on my mobile no 09845810177

Thanks
S N Singh
Director Works
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Kumar Organic Products Limited

Triclosan to curb COVID 19.pdf.pdf
925 KB

Kumar Organic Products Ltd.
Ingredients for us

Triclosan:

The multidimensional molecule to curb COVID-19 menace

Throughout history nothing has killed more human beings than an infectious disease. Covid-19 shows how vulnerable we remain! Currently, there are no approved vaccines or pharmaceutical therapies available for prevention of SARS-CoV-2 infection or treatment of COVID-19. The development of a specific vaccine is not expected for at least 12-18 months due to required time for research, evaluation, and regulatory approval. So the **"repurposing"** of available and approved drugs has emerged as a feasible strategy for treatment near term. Potentially suitable antiviral and immunomodulatory candidates have been identified and realized (*https://www.elsevier.com/__data/assets/pdf_file/0007/988648/COVID-19-Drug-Therapy_Mar-2020*). In this context, here's an insight to one of the most potent antiviral molecule, Triclosan, whose potential has been clearly substantiated in many medical as well as scientific forums.

Triclosan was developed in the 1960s and had come to healthcare sector in 1970s. Since then, it has expanded commercially and became a common ingredient in soaps, shampoos, deodorants, toothpastes, mouthwashes, cleaning supplies, consumer products, including kitchen utensils, toys, bedding, socks, and trash bags etc. It is incorporated in conveyor belts, fire hoses, dye bath vats, ice-making equipment as an antimicrobial. Showering with 2% triclosan has become a recommended regimen in surgical units for the decolonization of patients whose skin carries methicillin resistant Staphylococcus. Triclosan is also used in the coatings for surgical sutures.

Studies indicate that Triclosan is a versatile antimicrobial with an array of applications in therapeutics, personal and home care, presumably also in the treatment of COVID -19 as it traverses its path from bench to bedside.

Triclosan, a proven antimalarial drug:

Triclosan (2, 4, 4-trichloro-2-hydroxydiphenyl ether) has already been proved to be a more effective drug for malaria compared to quinine *(EP1137386 B1, 2006)*. The mode of action is primarily impairing the fatty acid synthesis by inhibiting the enoyl-acyl carrier protein reductase enzyme (*Triclosan targets lipid synthesis. Nature. 1998;394:531–532*). Triclosan inhibits incorporation of [14C] malonyl CoA in fatty acids in cell free system for fatty acid synthesis in the malaria parasite. A progressive decline in the longer chain fatty acids in the presence of Triclosan clearly implicates FabI of the malaria parasite as the target, as it plays a

deterministic role in the elongation cycle of the fatty acid synthesis. *(Ref: P.W. Majerus et al. (1968), Methods in Enzymol, 14, 43-52; EP1137386 B1, 2006).*

The medicament comprises an injectable composition consisting of Triclosan (2, 4, 4-trichloro-2-hydroxydiphenyl ether) or a pharmaceutically acceptable derivative thereof and a pharmaceutically acceptable adjuvant, or a diluent or a carrier, the composition being suitable for introduction in the blood by any method or for application by any injectable route, preferably intramuscular or intradermal or intraperitoneal or intravenous or intro-arterial or subcutaneous route. *(Ref: Patent EP1137386 B1, 2006).* Incorporation of [14C] malonyl-CoA in fatty acids and its inhibition by Triclosan was studied *in vitro*. Results reveal that Triclosan not only inhibits the incorporation of [14C] malonyl CoA in fatty acids but also the elongation reaction of fatty acid synthesis is targeted in a striking manner. Since, the enzymes involved in fatty acid synthesis in the malaria parasite differ from that of the human host, the above study paved the way for developing drug that are targeted towards an essential element (FabI) of the survival mechanism of the malaria parasite.

Triclosan in surgical sutures:

Surgical site infection (SSI) is a frequent complication of abdominal surgery causing increased morbidity. Triclosan-coated sutures are recommended to reduce SSI. Triclosan-coated Vicryl sutures for abdominal fascial closure decrease the risk of SSI significantly and based on the trial sequential analysis further RCTs will not change that outcome. *(Hernia. 2017 Dec;21(6):833-841. doi: 10.1007/s10029-017-1681-0. Epub 2017 Oct 17)*. Three globally recognized health authorities recommend the use of triclosan coated sutures for surgical site infection prevention. The CDC,WHO and ACS/SIS guidelines on reducing the risk of SSI are general to Triclosan –coated sutures and not specific to any brand. Triclosan-coated sutures are proved to reduce surgical site infection after open vein harvesting in coronary artery bypass grafting patients in a randomized controlled trial (*Eur J Cardiothorac Surg.* 2013; 44: 931-938). Effectiveness of triclosan-coated PDS Plus versus uncoated PDS II sutures for prevention of surgical site infection after abdominal wall closure was also demonstrated (*Lancet.* 2014; **384**: 142-152).

Triclosan for COVID-19 "Oral Hygiene":

Latest reports pronounce that live viruses were present in the saliva of infected individuals by viral culture method *(Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia.N.Engl.J.Med.https://doi.org/10.1056/NEJMoa2001316(2020).* Triclosan had been the preferred antimicrobial in oral hygiene for more than 25 years. Aiming to increase its efficacy, Triclosan has been associated to other molecules such as zinc citrate, a

complementary antimicrobial agent in oral care formulations (*The effects of a dentifrice containing zinc citrate and 2,4,4' trichloro-2'-hydroxydiphenyl ether.Periodontol.1986;57(9):555-5610).* It makes real sense to have potent antiviral oral rinses to block the possibilities of oral route transmission of COVID- 19.

Triclosan for COVID- 19 "Hand & Surface Hygiene Formulae":

The antiviral activity of Triclosan was assayed against murine hepatitis virus (MHV), as a potential surrogate for SARS-CoV. Furthermore, it has been confirmed that SARS-CoV-2 enters the cell in the same path as SARS coronavirus, that is, through the ACE2 cell receptor (SARS and MERS: recent insights into emerging coronaviruses. *Nat. Rev. Microbiol.* **14**, 523–534 (2016)).

The 2003 severe acute respiratory syndrome (SARS) was transmitted through direct and indirect contact and large droplet nuclei. A surface test method, which involves drying an amount of virus on a surface and then applying the product for a specific contact time, was used to determine the virucidal activity. The virus titers and log reductions were determined by the Reed and Muench tissue culture infective dose (TCID)50 end point method. Disinfectants and antiseptics, containing 0.050% of Triclosan demonstrated a 3-log reduction without any virus recovered in a 30-second contact time. (*Am J Infect Control. 2009 Oct; 37(8):649-52. doi: 10.1016/j.ajic.2009.03.012. Epub 2009 Aug 18*).

Triclosan for COVID-19 "Face masks":

The majority of facemasks and surgical facelets presently on the market consist of fluid resistant material to protect the user from the exposure to aerosols/moisture in the surrounding atmosphere, but do not provide any antimicrobial protection. Triclosan has been used as an active agent in antibacterial facemasks. For example, U.S. Pat. No.7,044,993 and U.S. Publication No. 20030205137 describe the manufacture of masks equipped with a network of polyvinyl chloride (PVC) based organic fibers containing triclosan. Triclosan is impregnated within the three-dimensional matrix of the network of PVC fibers. WO 2006/034227 describes the manufacture of a medical facemask comprising a central transparent portion and an outer filter portion, wherein triclosan is incorporated into one or more regions of the mask.

A strong global presence in the antimicrobial platform close to three decades, we, **Kumar Organic Products Ltd.** is one of the largest producers of Triclosan. Our Triclosan is manufactured in an USFDA approved facility and we are committed to supporting and responding to the needs of our community during this rapidly evolving set of unpredictable circumstances. The need of the (pandemic) hour is to employ a suitable virucidal agent which can resist/inhibit/ kill SARS Cov-2 virus and the data shows that Triclosan could be a potent candidate.