## CELIZAREN

A Patent Applied blend of JYUNKA 550 mg

#### **Description:**

- Celizaren counters the condition of Inflammation in Chronic Kidney Disease.
- JYUNKA 550 mg the blend of PEA, Quercetin, Resveratrol & Cholecalciferol manufactured in accordance with MPFAITECH technology.
- JYUNKA is a proprietary blend & is manufactured in Technical Collaboration with ENAVANT Research LLC, USA.
- JYUNKA and MPFAITECH are the Trademarks of Enavant Research LLC, USA.

#### Celizaren contains the following key components:

 Palmitoylethanolamide (PEA) is considered an endogenous PPAR- agonist or activator, interacting with this receptor to inhibit inflammatory pathways & oxidative stress.

#### Palmitoylethanolamide (PEA)

- During kidney inflammation, PEA can modulate the PPAR pathway that is able to attenuate NFkB induced inflammatory factors (IL-1 or TNF), inhibit infiltration and activation of MC, reduce mesangial matrix proliferation induced by reactive oxidative stress (ROS) which then resulted in albuminuria.
- Thus, by reducing chronic inflammation and by inhibiting oxidative stress, PEA may reduce risk factors associated with the progression of CKD.

#### Quercetin

 Quercetin, is an FAAH Inhibitor which can prevent degradation of PEA from FAAH enzyme in the body but also exert synergistic effect with PEA and Cholecalciferol or along with other optionally comprising like Anti-oxidant in preventing progression of Chronic Kidney Disease (CKD) due to causes of inflammation.

#### Resveratrol

 Resveratrol is involved in a variety of diseases, the aging process and numerous cellular response pathways. Resveratrol can exert protective effects against both acute and chronic kidney injuries through its antioxidant effects and ability to activate SIRT.

#### Cholecalciferol

- Cholecalciferol plays an important role in the disease management of CKD individually. Renin-angiotensin system (RAS) blockers is widely recognized as the major independent risk factor for progressive GFR loss and CV events in non-dialysis CKD patients.
- Recent evidence supports the use of vitamin D acts as "the good companion" of anti-RAS agents and antiproteinuric agent in CKD.

#### MPFAITECH

• A Technology to ensure the proprietary blend is presented in a form that could be easily absorbed in the human body.

#### Direction for use:

1-2 tablets a day or as suggested by Healthcare Professional.

#### **Presentation:**

Celizaren is available as a strip of 10 Tablets.

I am:	
Call me on:	
Mail me @ :	

Currently, 2.4 million trees are cut every year leading to Global Warming...

Currently around 17.2% patients may suffer from CKD in India.



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#### Introduction

- Chronic Kidney Disease (CKD) is a serious public health problem whose prevalence has increased in the last few years. Prevalence of CKD is estimated to be 5%–16% worldwide. 2
- As per Indian Council of Medical Research data, prevalence of CKD is 17.2% and among these Indians diabetes and hypertension are major causes approx. 40%–60%.
- Although CKD is generally progressive and irreversible, there are steps that patients can take to slow
  the progression, enabling patients to live longer without complications or the need for renal
  replacement therapy. Low protein diet such as Keto analogues, use of probiotics, various phosphate
  binding therapies, and antioxidant therapies are used as conservative management therapies in CKD
  patients.
- Several factors are associated with the onset and progression of CKD, such as obesity, hypertension and diabetes mellitus. Beyond these factors, there is evidence of a pathophysiological role for inflammation in CKD.<sup>1</sup>
- However, none of the presently available treatment modalities focuses on the importance of managing Inflammation which in various articles has been studied as an important cofactor for CKD progression.

#### Inflammation and Chronic Kidney Disease

- Inflammation is a rapid and acute protective response to infection or trauma.
- Inflammation is generally considered a response of the organism to any injury capable of causing cell
  or tissue damage. This standard response is common to several tissue types, being mediated by a
  number of substances produced by the damaged cells and immune cells which happen to be in the
  vicinity of the injury.
- The prevalence of inflammation varies from 30% to 75% depending on multiple factors, such as residual renal function, geographic and genetic differences and dialysis therapy.<sup>3</sup>

#### Causes of Inflammation in CKD⁴

- Decreased GFR
- Volume overload
- Alterations in body composition
- Uremic toxins
- Increased production of pro-inflammatory cytokines
- Oxidative stress
- Deteriorating nutritional state and food intake
- Infection, Genetic and Epigenetic factors

### Completing the Missing Link in Conservative Management Therapy

- As already mentioned, several clinical studies corroborate the importance of inflammation in the pathophysiology of CKD. As a result of the work of a Nobel Laureate Rita Levi Montalicini, scientists have been able to find a natural amide which is responsible in majority to manage inflammation in the human body.
- Palmitoylethanolamide (PEA) the endogenously produced amide has been established to work on the inflammatory pathways acting as a pacifier against inflammation. However, in certain diseased conditions the amount of the amide reduces drastically in the body resulting in aggravated inflammation and furtherance of diseased condition. To add insult to injury, the endogenously produced FAAH (Fatty Acid Amide Hydrolase) enzyme further degrades the available amide further reducing its quantity and effectiveness. Even if the amide is supplemented externally, the combined action of FAAH enzyme and low absorption nature of the amide makes the administration futile.
- Celizaren, a patent applied proprietary blend of the endogenously produced amide Palmitoylethanolamide (PEA), with Quercetin, Resveratrol and Cholecalciferol (Vitamin D) manufactured in accordance with MPFAITECH technology in collaboration with Enavant Research LLC, USA functions to counter the action of FAAH enzyme, improves absorption characteristics and thereby improves the condition of aggravated Inflammation in Chronic Kidney Disease and supports the Conservative Management Therapy from an angle not available thus far.

### Factors and inflammatory pathways contributing to the progression of Renal disease⁵

