

## **KATONICS DISCOVERY CIRCLE MONOGRAPH SERIES**

**Offers a Curiosity Driven Exploration Platform based on**

**A Kitchen Technology to make Super-active Oil Extracts from Natural products**

**And Provides Extremely Affordable, Simple and yet Highly Effective Solutions**

**MONOGRAPH SUBJECT: POMEGRANATE (*Punica granatum*)**

*A word of caution to the reader: The literature cited here is a selective compilation of information from Ayurveda and other websites. The author has not validated this information and assumes no responsibility for its veracity.*

*The method of preparing super-extracts described below is based on author's experience. The dosages suggested for exploration are from the experience of author and a few other volunteers. Dose response must be explored for each application to arrive at a useful dose with positive results.*

*The author is not a medical doctor and do not dispense medical advice or prescribe the use of any technique as a form of treatment for physical, emotional, or medical problems without the advice of a physician directly or indirectly. The intent of the author is to only offer information of a general nature to help motivate your own quest for well-being. .*

*The Reader has the constitutional right to use this information. However, the reader must use own discretion and should consult own health provider or any other relevant competent authority first and assume total responsibility for the use of information contained here. The author assumes no responsibility for your actions.*

### **1.0 Introduction:**

#### **1.1 Healthcare Challenge:**

Modern medicines are known to have strong adverse reactions. Yet, they are often given with little advice on dietary guidelines. Despite great advances in modern science, several of the day-to-day and chronic problems do not appear to have very effective solutions. They are also expensive and their availability in rural India as also in other developing countries is often unsatisfactory. Even in developed countries a quick delivery of healthcare for day-to-day problems is often a problem.

Traditional natural products based solutions use a balanced combination of medicines derived from natural products and dietary and lifestyle advice (*Pathya, Dinacharya and Rutucharya*) and these balanced combinations provide a holistic and personalized solution. However, typical dosages of such medicines are high, not user-friendly and are also expensive. Also, with the pressures of modern professions and the almost a complete disappearance of the institution of a Family Physician, the quality of integrated advice on Diet/ Medicine seems to be suffering.

The two important primary dimensions of healthcare are medicines and advice on diet and nutrition for meeting the preventive, curative and restorative health needs.

### **1.2 Technology and Business Model Challenge:**

Modern business models of drug discovery, coupled with IPR and drug pricing do not appear to provide any ray of hope of greatly extending **accessibility and affordability**.

Using the vast pool of knowledge of natural products along with the comprehensive advice on diet and lifestyle therefore seems to be an obvious logical solution for achieving the twin goals of accessibility and affordability worldwide. However, use of current business models will not help achieve these goals. Mass accessibility and even raw materials availability cannot be realistically achieved with the current daily herbal dosage of 1 to 30 gm per day.

A key to a very effective use of such knowledge requires a solution in **three parts**:

1. A **'Process Technology Breakthrough'** in the processing of natural products. What is needed is a simple kitchen process which will reduce the herbal dose by at least a factor of 100.
2. **Simple, Easy to Use, Dietary Guidelines** - Such advice must be integrated with the use of medicines.
3. **A Novel 'Empowerment' based Sustainable Social Business Model** - which, together with the above two will allow the dream of 'Affordability and Accessibility' to be achieved.

As many of you know, I am a chemical engineer (B.Tech. IIT Bombay, and Ph.D. – MIT, USA) and worked in senior functional levels in Chemical R&D from 1971 to 1997. In 1983, I was introduced to *Ayurveda* and have been applying my research background to conduct personal investigations in *Ayurveda*. Since 1997, these investigations in *Ayurveda* have been a full time endeavor. My personal investigations have been supplemented by my work as an Adjunct Professor of Chemical Engineering at IIT Bombay (2001-2013) conducting research on *Bhasma* and Homeopathy.

My research has resulted in the invention of a novel process technology to make super-active extracts from any natural product. I have also developed novel methods of application for their use in Human, Crop and Veterinary field. I have three Indian patents on this technology

### **1.3 Process Technology Breakthrough**

**Simple Kitchen process:** I have invented just such a breakthrough process as desired above. I have two Indian Process Patents and one Product Patent. This is a simple kitchen process. It is a universal process which converts any natural product such as a herb into its super-extract in oil. Any other biomass (mushroom, shrimp, etc.) or a metal/mineral product can also be processed using the same process to make a super-extract in oil. A typical preparation is described in detail later. .

### **Huge Dose Reduction – User-friendly – Environment-Friendly.**

I have made such extracts from over 100 different herbs, biomasses and metals/minerals. The exciting thing is that when any natural product is cooked in oil in this manner, its daily dose is reduced by a factor of at least 100 to 1000 compared to its dose in any other conventional form. This finding is truly NOVEL and totally unanticipated.

One oil drop (35 mg) of such a super-extract is, typically, from just 3.5 mg of parent herb. The daily dose ranges from just 1 to 30 drops. In other words the typical daily herbal dosage using these oil super extracts is 3 mg to about 100 mg. In comparison, in conventional *Ayurveda* / Herbal medicine practice the daily herbal dosage ranges from 1 to 30 gm.

The low dose also makes the extracts very user-friendly, easy to take, palatable, and readily portable. The super-extracts can be taken orally and used topically or as nasal drops. Topical use includes direct application to a bruise, cut, or sprain. Special effects are also produced by applying the drops to the top of the head and to other *chakra and Su Jok* points. Oil medium enables excellent shelf life of at least several years and allows storage at room temperature.

The huge dose reduction also makes this extremely environmentally friendly. This will enable effective use of relatively scarce natural resources without any fear of depletion

The super-extracts have been made with herbs well known and used extensively in *Ayurveda*. The super-extracts display the known properties of the parent natural product. The herbal dose has to be appropriately scaled down due to an increase in the potency per unit herb weight. Over 1000 volunteers have tried these oils for a wide range of health problems in several therapeutic areas and found them to be very effective for preventive, curative and restorative purposes. The super-extracts are fast-acting and have shown deeper effects in many areas.

These super-extracts also work in all other Life Science Segments such as Veterinary and Crop Science. An herbal dose of 2 to 5 gm/MT of poultry feed has produced positive results in food conversion efficiency. The herbal dosage in crops is just 1 g/Ha per spray to be repeated once every 3 weeks. The super-extracts work in a wide variety of crops - vegetables, cereals, pulses, horticulture and forestry. They confer resistance against sucking pests and borers, faster growth, higher yield, superior produce quality and shelf life.

#### **1.4 Evolution of Simple, Easy to Use Dietary and Lifestyle Guidelines:**

Over the past several years, I have found an enormous impact of 'what, when and how much to eat' on many day-to-day and chronic health issues. I have also found that most sufferers are not aware of the role that diet can play. The information in literature is often confusing and conflicting and patients do not seem to get comprehensive advice when they visit a clinic. Even diabetics do not often seem to get a quantitative advice as they must.

I have therefore prepared a simple spreadsheet to define how much to eat and when and how to balance the needs of calories, glycemic load, proteins, essential fats, vitamins, minerals and so on. I have also prepared simple guidelines on what to eat in moderation or not at all. I have published a book – "**Diet and Lifestyle for Health in the 21<sup>st</sup> Century: A Self-empowerment Guide**" – which explains the key requirements of a healthy diet and lifestyle. Such information must be integrated with medicines for an effective and complete health solution.

#### **1.5 A Novel 'Empowerment' based Sustainable Social Business Model.**

The two above – Process Technology Breakthrough and Dietary Guidelines - by themselves will not meet the objectives of Accessibility and Affordability in any conventional business model.

What is needed is a method of ‘**EMPOWERMENT**’ of people in the society. Such empowerment must enable a person to make his/her own super-extracts in own kitchen. Such a step is expected to help bypass all constraints of a traditional business model.

The next step is to create a grass-roots movement in which a large number of persons join the KATONICS DISCOVERY CIRCLES groups and participate in a spirit of “Curiosity Driven Exploration” to continually generate new ideas for solving preventive, curative and restorative health issues.

Finally, socially sustainable clinics need to be set up. Such clinics can compile all such information, make it available to people and also solve more chronic/complex problems, and be a catalyst for the propagation of this “Curiosity Driven Exploration’ culture for the benefit of society.

## **2.0 EVOLUTION OF AFFORDABLE, ACCESSIBLE AND SOCIALLY SUSTAINABLE HEALTH PLATFORM.**

**2.1 Empowerment:** The most important part of empowerment is to enable a person to directly make the super-extracts in his/her kitchen for personal use and use them along with diet and lifestyle guidelines. It is also important for a person to understand basic concepts of Ayurveda, Homeopathy and Su Jok / Chakra and how they can be used along with super-extracts today and tomorrow. To achieve this, I have written two more books. Information about these two books and also the Diet and Lifestyle book and their availability is given below. **I have provided details of my inventions and a lot of other information on the use of these super-extracts in “Open Source” for the personal use of all.**

Thus, the first step of the Business Model Innovation is to empower the people by making the process of making such extracts directly available to them and to provide them with a booklet of Diagnosis (*Nidaan*) and Therapeutic Advise (*Chikitsa*) along with dietary guidelines for managing simple day to day problems. The process of making extracts is just a variation on making *tadka / phodni* used in day-day Indian Cooking and therefore presents no difficulty for any average person or for any housewife even in a remote part of the country. Direct availability of super-extracts along with such guidelines forms a very crucial element of an affordable healthcare system.

- To join the process most effectively, **buy the set of three books** listed below. **For further clarifications, I can be contacted at [sgkane@gmail.com](mailto:sgkane@gmail.com)**
- These books will be extremely valuable for anyone interested in health issues – for themselves, their family, their farms or their livestock
- **Prices, availability and contents are described below**  
Vol. I and Vol. II are available as E-Books and also in Print form
- E- Book Price: In India – Rs. 399; USA and the rest of the world – US \$ 9.99 or equivalent

- Links to order the two E-Books are provided at <http://plinypublishers.com/blog/2014/03/21/herbal-oil-extracts-affordable-healthcare-now-available-sale-worldwide/>
- OR go to amazon.com, put in – Shantaram Kane – and search. The vol. I and vol, II will pop out
- **Print copies** are available with me at Rs. 500 each,

### **2.1.1 Ayurveda – Concepts and their Evolution - Curiosity-Driven Explorations – Volume I:**

E-Book - published February 22, 2014. Print Edition Released – January 17, 2015

**Book Description:** This book is Volume I of a two part series on curiosity driven explorations. This book introduces the reader to the ancient story of sustained curiosity-driven explorations approach of our ancestors and how this led to a vast treasure trove of knowledge in the form of *Ayurveda*.

The narrative discusses important key areas such as:

- Language of *Ayurveda*
- Evolution of *Dravyagunavidhyān* – i.e. properties of all natural products
- Evolution of process Technology – Decoctions, *Asava*, *Arishta*, *Siddha-tailam/ghrutam*, and *Bhasma*
- Evolution of poly-herbal formulations
- Evolution of food Technology and diet and lifestyle guidelines
- Discussion of special claims and products in the context of modern science
- How to continue with curiosity-driven exploration in the 21<sup>st</sup> Century

### **2.1.2 From Herbal Oil Extracts to Affordable Healthcare - Curiosity-Driven Explorations – Volume II:**

E-Book published on March 21, 2014. Print Edition Released – January 18, 2015

**Book Description:** This book is Volume II of a two part series on curiosity driven explorations. This book describes my personal story of sustained curiosity-driven explorations starting from a hobby of *Ayurveda* and how they led to a series of breakthroughs. The book explains the simple user-friendly and extremely affordable kitchen technology, how to make these super-active extracts, the properties of a variety of extracts and their combinations, and how they can be used for preventive, curative and restorative health for Humans, Crops and in Veterinary science.

The narrative discusses several key areas such as:

- Literature about innovators and their attributes
- Invention of the first super-extract and exploration of its use for humans
- Extension of its use for animals, birds and crops
- Evolution of super-extracts and combinations from all natural products

- Integration with Homeopathy and *Chakra / Su Jok*
- Technology details, quality control, precautions during preparation and use
- Affordable healthcare model
- An appeal to join a propagation movement.
- **Note: A few vaidyas and also several individuals have downloaded/ purchased the books and have started making their own super-extracts. Do join them!**

**My Diet Book in Print version – both English and Marathi Edition – is available directly from me. Print Book Price:** In India: English Edition: Rs. 300; Marathi Edition: Rs. 400. + shipping, USA – US \$10 + shipping.

### **2.1.3 Diet and Lifestyle for health in the 21<sup>st</sup> Century: A Self-empowerment Guide: – Published 2011.**

**Book Description:** While conducting my research I noticed the effect food intake and lifestyle have on health. This book is derived from those observations and empowers the reader to effectively plan food intake and lifestyle. The book provides extensive information on many topics, and explains with examples how this information may be used in a stepwise manner to develop your own **quantitative** diet plan.

The narration will introduce the reader to the simple common sense ideas of

- Compiling information
- Making and using simple tables to see a number of things at a glance
- Simple, easy to follow, methods of calculation and estimation
- A quantitative approach in diet planning
- A holistic approach which looks at both what to do and what not to do

### **2.2- Katonics Discovery Circle Monograph Series:**

The set of three books provide a lot of information about

- The key concepts of *Ayurveda, Homeopathy, Chakra / Su Jok*
- Detailed recipe to make super-extracts from a wide variety of natural products – herbs/biomass, metals, minerals and safety precautions during preparations
- Methods of nomenclature and quality control
- Evolution of complex formulations and their use
- Selection of extracts for day-to-day problems
- Selection of extracts for cops and in veterinary science

It is stressed in these books that our ancestors developed this enormous pool of knowledge – *Ayurveda* - by pursuing a sustained “Curiosity Driven Exploration” for thousands of years. It is also made obvious that my own series of inventions and discoveries were an outcome of my personal “Curiosity Driven Exploration” over three decades. I am personally convinced that if a large number of persons join the “Curiosity Driven Exploration Platform” many more inventions

and discoveries are waiting to be unraveled. However, much more needs to be done to excite the public and make them join the “Curiosity Driven Exploration Platform” to really bring out the true potential of this process technology breakthrough.

The “Katonics Discovery Circles Monograph Series” is aimed at providing this thrust. Creation of such monographs is possible because several of us have been exploring the use of individual natural products and their dose response in the form of their super-extracts and are discovering strong and sometimes unexpected novel applications. Stories of such developmental effort should provide a strong motivation for people to join such a movement. More monographs will be released in future as sufficient information gets compiled on more and more natural products.

Each monograph will be based on **one natural product. It will provide**

- Selective summary of literature information /claims and possible side effects about that natural product
- Preparation recipe and dosage suggestions.
- Illustrative examples anecdotal information of what has been explored so far
- Ideas for future exploration
- Suggestions for documentation and data management

### **2.3- Socially Sustainable Clinic:**

Compilation of efforts of individuals through the medium of KATONICS DISCOVERY CIRCLE is certainly desirable. However, this must be supplemented with the establishment of socially sustainable clinics.

Such clinics may be run by a group of *Ayurveda* practitioners by themselves or they may be set up by NGO's. Philanthropists and Corporates who want to promote Affordability and Accessibility of Healthcare to all. Initial objective will be to have at least one such clinic in every district Each clinic will be run by a small group of practitioners and their assistants and will make their own super-extracts in an attached kitchen. A small kitchen making two batches per day will be sufficient to provide annual requirements of at least 5000 patients. In other words, the capital requirement of such a clinic will be small. The cost of medicines is also small as the dosage is very small. The clinics must -

- Hold sessions at least once a fortnight to educate the patients about diet and lifestyle – supplemented by simple booklets
- Regularly hold classes with demonstrations to teach people how to make super-extracts in their own kitchen and provide a booklet of what extract to use when and how for simple, day-to-day problems
- Provide solution to all other cases including chronic and complex problems
- Continually try folklore ideas and , in general, promote the spirit of ‘Curiosity Driven Exploration’
- Compile information and generate data base on effect of combinations and new ideas
- Provide a kit and simple instructions in remote locations and train locals to use them for emergency and simple day-to-day problems

Such a clinic will operate on a “Wheel and Spoke” model and support several nearby towns / villages. This clinic will be run as a Sustainable Social Business Unit.

With this general background, let us turn our attention to the Subject of this Monograph.

## **MONOGRAPH SUBJECT: POMEGRANATE (*Punica granatum*)**

### **3.0 POMEGRANATE BENEFITS - SELECTED LITERATURE**

#### **3.1 General Information**

The flowers, leaves, bark, peel and of course the seeds of pomegranate are all edible and have potent medicinal qualities that have given it the status of a divine fruit. Believed to have flourished in the Garden of Eden. Pomegranate is a part of folk practices worldwide. In *Ayurveda*, the world’s oldest system of medicine, the pomegranate has been extensively used as a source of traditional remedies for thousands of years.

<http://homeofayurveda.org/the-pomegranate-ayurvedas-power-fruit/> provides general information about pomegranate, its key chemical constituents and benefits. A brief summary is given below.

The chemical ingredients in the pomegranate are ellagic acid, ellagitannins – including punicalagins- punicalic acid, flavonoids, anthocyanidins, anthocyanin’s, and estrogenic flavonols and flavones. Compounds found only in pomegranates called punicalagins are shown to benefit the **heart and blood vessels**. Punicalagins are the major component responsible for pomegranate’s antioxidant and health benefits. They not only **lower cholesterol, but also lower blood pressure and increase the speed at which heart blockages melt away**.

**RIND/PEEL:** Numerous uses of Pomegranate peel have been reported

**Sore Throat/Inflamed/Bleeding Gums:** Decoction made by boiling pomegranate **peels** can be used for gargling in case of sore throat and tonsillitis. 1tbsp of pomegranate peel powder should be taken twice daily with water for preventing bad breath. . Massaging the gums with pomegranate peel powder helps in **soothing swollen, inflamed and bleeding gums**.

**Face Pack for Pimples/boils/acne/removal of white/black heads:** Roasted and powdered pomegranate skin can be mixed with rose water or lime juice and applied as a **face-pack for soothing pimples, boils, acne and for removing white heads and black heads**.

**Dental Caries:** Pomegranate powder mixed with tiny amounts of freshly ground black pepper can be used as a toothpowder for **preventing dental caries**.

**Stomach Infections:** In Kerala, Ayurveda physicians have been using the **rind** of this exotic fruit for centuries as a traditional remedy against **diarrhea, dysentery and intestinal parasites**

**SEEDS AND JUICE :** The **seeds and juice** are considered a tonic for the **heart, throat and eyes**, in addition to being used for a variety of purposes, such as **stopping nose bleeds and gum bleeds, toning the skin, firming-up sagging breasts and treating hemorrhoids**.

In

<http://www.foodtrients.com/inside/pomegranate-the-anti-aging-anti-cancer-queen-of-fruit/> Dr. Mark Rosenberg describes several properties of pomegranate for both men and women.



Pomegranates contain a weak, phytoestrogen bioidentical to a certain type of estrogen called estrone, one of the 3 types of estrogen that your body naturally manufactures (estriol, estrone, estradiol). Here's what this phytoestrogen can do for men and women specifically: This substance can be very beneficial in treating 2 conditions often associated with aging in older men and women. One is **prostate cancer in men** and the other is **atrophic vaginitis in women**.

The active compounds in pomegranates, cited in research in the Journal of Ethnopharmacology, have been found to stimulate "keratinocytes", keratin cells, which are present in youthful, healthy skin. They help stimulate the production of collagen and elastin in skin, helping to preserve its volume and tone. Another compound, punicalagin, is an Omega-5 fatty acid that helps your skin hold onto collagen, rehydrate skin and prevent moisture loss, giving your skin a plumper, more youthful look. It creates a rejuvenating effect on elasticity, texture, tone, softening of wrinkles, and decrease of redness and dark age spots. The oil has also been found in research to reduce the growth of skin tumors.

Pomegranates also contain good amounts of Vitamin K, phosphorus, magnesium, calcium and manganese that help stimulate the production of new bone cells and maintain bone density and strength, a significant concern of growing older. In addition, pomegranate compounds, because of its collagen stimulating properties, also helps maintain the strength of supporting cartilage and ligaments

**Pomegranate juice** taken daily is good for heart and useful for people suffering from low B.P and Asthma The juice is rich in antioxidants and can keep bad cholesterol –LDL- from oxidizing and prevents atherosclerosis. It inhibits abnormal platelet aggregation that could cause heart attacks, strokes and embolic disease. Pomegranate juice is useful for women as it is believed to **decrease the risk of breast cancer**. It can prevent and **slow down Alzheimer's disease** and **prevents cartilage deterioration to keep osteoarthritis at bay**. Another benefit is that the juice increases memory power and also delays ageing.

Also see the link below: <http://www.buzzle.com/articles/pomegranate-seeds-health-benefits.html>

### **1.3 Pomegranate for Cardiovascular Benefits** by Dr Syed Zair Hussain Rizvi

<http://mrinalkantipal.blogspot.in/2013/03/bypass-bypass.html>

Experiments by Dr. Rizvi using seed decoction and juice as reported in the above website are reported below in *italics*.

***Seed Decoction:*** *I tried an experiment with dried pomegranate seeds. I prepared a decoction boiling the **fistful of dried seeds in half liter of water for 10 minutes**, squeezed the seeds, strained the decoction and advised those patients suffering from painful angina to use a glass of lukewarm decoction on an empty stomach in the morning. Amazing result was observed, the decoction of dried pomegranate seeds worked like a magic, the **feelings of tightness and heaviness of chest and the pain had gone**.*

*It tried the same decoction on patients who were suffering from **painful angina, coronary arterial blockage, cardiac ischemia (insufficient blood flow to the heart muscle)** etc, waiting for a bypass surgery. The patients experienced quick relief in all symptoms including painful condition.*

***Juice:*** *In a case of coronary arterial blockage the patient started using half glass of fresh pomegranate juice everyday for one year. Although all symptoms were completely relieved*

*within a week but he continued taking it for a whole year, it **completely reversed the plaque build-up and unblocked his arteries to normal, the angiography report confirmed the evidence.***

*Thus decoction of dried pomegranate seeds, fresh pomegranate juice or eating a whole pomegranate on empty stomach in the morning proved to be a miracle cure for cardiac patients. **But the lukewarm dried seeds decoction proved to be more effective compared to eating a whole pomegranate or fresh pomegranate juice.***

*Thus, use of pomegranate in any way has demonstrated dramatic effects **as blood thinner, pain killing properties for cardiac patients, lowers LDL (low-density lipoprotein or bad cholesterol) and raises the HDL (high-density lipoprotein or good cholesterol).***

*Many cardiac patients have reversed their heart diseases by using one glass of lukewarm decoction of pomegranate dried seeds, half glass of fresh pomegranate juice or eating a whole pomegranate on empty stomach in the morning. It was the very first real breakthrough in the history of cardiology to successfully treat the cardiac diseases by a fruit.*

All of above can be summarized into following application areas.

#### **Rind/peel:**

Sore Throat, Inflamed/bleeding, Swollen Gums

Face Pack for Pimples/boils/acne/removal of White/Black Heads

Insect bites, Skin Rashes, Psoriasis, Eczema

Remedy against dental caries, diarrhea, dysentery and intestinal parasites, stomach cramps

#### **Juice/Seeds:**

Stopping Nose/Gum Bleeds and treating Hemorrhoids

Toning the Blood Vessels, Skin, softening Wrinkles, firming-up Sagging Breasts

Maintains Bone density and prevents Cartilage /Ligaments Deterioration

Lowers B.P., LDL and raises the HDL

Prevents Atherosclerosis. And Abnormal Platelet Aggregation.

Relieves Painful Angina, Coronary Arterial Blockage, Cardiac Ischemia

Decrease the risk of Breast and Prostate Cancer. It can prevent and slow down Alzheimer's disease, increases Memory Power and also delays Ageing.

## **4.0 POMEGRANATE SIDE EFFECTS**

Intake of any natural product may produce undesirable side effects. These can be classified as those due to excess use, sensitivity of the person or interaction with body enzymes or other medication.

<http://www.buzzle.com/articles/pomegranate-dangers.html> describes such effects

### **Digestive Disorders – Excessive Intake of Pomegranate**

The most common side effects of pomegranate consumption, problems such as nausea,

vomiting, abdominal pain and diarrhea, are mostly caused due to excessive intake of the fruit or its juice. Excessive quantities of the fruit can lead to problems of the gastrointestinal tract. However, these problems rarely persist and usually subside after a few hours. You should avoid intake of oily food along with pomegranate.

### **Allergy**

People who are allergic to fruits should be careful before consuming pomegranate, as some people might be allergic to it. People, who suffer from allergic conditions such as asthma, should avoid the fruit as it can trigger allergic reactions in them. Pomegranate allergy may manifest itself in many forms and some of the common symptoms of allergy are as follows: Facial swelling, Hives and rashes, Difficulty in breathing, Painful swallowing, Pain and swelling in the mouth.

### **Low Blood Pressure**

Pomegranate reduces blood pressure. Another side effect of pomegranate is its reaction with medications, especially those meant for regulating blood pressure. People, who are on prescription drugs for blood pressure and heart troubles, should limit their consumption of this fruit.

### **Effect on Enzymes**

Pomegranate juice may restrict or hinder the functioning of certain enzymes secreted by the liver. Some of these enzymes are responsible for the breakdown of the chemical compounds present in medicines and in their absence; the toxic chemicals begin to build up within the body and can prove to be fatal. So, if you are on any drug, you should speak to your doctor for detailed information on what all things you need to avoid.

**In the context of Super-extracts, 1 drop of 1 strength should be given orally and applied topically to check if the person concerned is allergic to such a dose. If no allergic reactions are produced, dosage can be continued and a higher dosage can be gradually tested, if needed.**

**For B.P. patients, super-extract should not be given along with the B,P. medicine. Also, B.P. levels should be periodically checked to ensure that hypotension is not produced.**

## **5.0 SUPER-EXTRACT NOMENCLATURE AND PREPARATION**

**Abbreviation** for Pomegranate super-extract is PUGR and is derived from its Latin name – *Punica granatum*. The letter T is added - **PUGR-T** – if the extract is from total pomegranate – peel, juice and seeds. If the extract is only from juice and seeds and does not contain peel, it is designated as **PUGR-JS**.

**Strength:** A number is added to indicate potency or strength. Thus, if 225 gm of total pomegranate is cooked with 450 gm (wt. of 0.5 liter oil) sesame oil to make a super-extract, it is  $(225/450) \times 100$  or 50% based on initial quantities raw material and oil. Such an extract will be

designated PUGR-T-50. Extracts of different lower strengths are made by a simple dilution. Thus, 10 ml of PUGR-T-50 diluted to 100 ml with the addition of 90 ml more sesame oil represents a 10 fold dilution. This diluted extract will be designated PUGR-T-5.

A drop of oil is approximately 33 mg. So one drop of PUGR-T-5 and PUGR-T-1 are based on just 1.75 mg and 0.33 mg of total initial pomegranate.

**Preparation – General Guidelines:** For home preparations, the suggested batch size is to use 0.5 liter (450 gm) of sesame oil. Smaller or larger batch sizes can be used. However, it is desirable to control total boiling time between 30 to 60 minutes. A minimum boiling time of 30 minutes ensures that super-Activity is generated. Keeping it to within 60 minutes ensures that loss of activity and rise of toxicity due to degradation are controlled within acceptable limits.

The boiling time control is achieved by keeping the total water – water estimated in the natural product +extra water added for blending - below 500 ml. Time is also controlled by keeping the boiling rate as low as possible.

The quantum of starting natural product with 0.5 liter oil depends on the nature of the raw material. For dry powders or otherwise dry biomass, 45 gm are recommended. This will directly give a super-extract of 10 strength (45 gm raw material/450 gm oil). As the moisture content of the raw material rises, a higher and higher amount is recommended. Thus, for Garlic, Ginger, Onion 90 to 135 gm may be used yielding a super-extract of 20 to 30 strength. With materials such as Aloe or Pomegranate, 225 to 370 gm may be used yielding super-extract of 50 to 70 strength. However, to control the boiling time, the total weight of raw material + water used for blending should not exceed 500 gm.

The purpose of using higher amount of raw material, wherever possible, is that in a single batch you get a large amount of extract and so the number repeats can be reduced. The actual strength of a particular extract to be used depends on the dose response.

#### **Preparation – Equipment and facilities needed for a standard 0.5 liter batch**

- Raw materials: Herbs and other biomass can be dry – seeds, bark ,roots, dried herbs, or fresh herbs – *amla, ginger, brahmi. mushrooms*. The weight of the raw material used for calculation of strength is the weight as is.
- Sesame oil –0.5 liter
- Digital weighing scale with 1 gm accuracy and a range of 1 kg.
- Sharp knife to chop biomass into small bits and Pestle and mortar in cases where pounding is needed to reduce size.
- Blender to chop biomass with water into a puree
- Gas stove where the heating rate can be controlled.
- 3 to 4 liter standard S.S. cooking pot preferably with a flat bottom
- Flat bladed S.S. ladle to stir and scrape the bottom of the vessel and sides
- 6” diam. S.S. strainer with a cloth filter or two layers of muslin cloth
- S.S. receiver pot – 1 liter volume
- A few empty bottles with a plastic funnel for filling diluted versions of super-extract
- S.S. pourer with a sharp beak to fill small bottles for dispensing super-extract

- Plastic or glass bottles with a nozzle insert for dispensing super-extracts

### **Preparation – Pomegranate**

As discussed earlier, in case of Pomegranate 225 to 270 gm and even up to 300 gm may be used. However, it may be desirable to make two separate preparations – PUGR-T and PUGR-JS. One option for doing this is given below.

Take one full pomegranate – let us suppose it weighs 270 gm. Cut the entire fruit vertically (rind, juice and seeds) into two parts. Weigh each part separately.

**Part I** – approx 135 gm will be used for Total Pomegranate Recipe- product to be designated as **PUGR-T- 30 (135 gm/450 gm)**

**Part II** - From the other half of cut fruit, remove rind and only keep seeds and juice. Let it be 90 gm This will be used for Juice/Seed recipe to be designated as **PUGR-JS -20 (90 gm/450 gm)**.

Please note that actual weights have to be used for calculations.

**Detailed steps for each recipe are identical and are described below for PUGR-T-30.**

1. Take the 135 gm half-cut portion, cut it into small pieces (less than 1 inch).
2. Mix these pieces with 250 ml water and make them into puree using a blender. .
3. Take this entire puree along with 500 ml sesame oil into a 3 to 4 liter stainless steel flat bottomed (preferred) cooking pot.
4. Bring this mixture to boil and continue boiling at a low/moderate bubbling rate
5. Continuous stirring with a flat bladed stainless steel. ladle is essential. This is to ensure that there is no sticking at the bottom of the vessel or on its sides. If any sticking tendency is observed, vigorously scrape it off.
6. Adjust heating rate such that the water can be completely boiled off, preferably, in 30 to 45 minutes.
7. Towards the end, bubble size reduces, sometimes a foam is formed and then the bubbling stops. As this happens, vapors of oil can be seen rising when viewed along the side and oil smell can be felt.
8. Stop heating, remove the pot from heat and allow the mixture to cool.
9. Take a 6” diam. S.S. strainer with a good filter cloth (or just two layers of ordinary cloth) and filter the mixture into a receiver pot.
10. Take out a small amount of cake at a time and squeeze it to recover as much oil as possible.
11. Finally, squeeze the cake left in the cloth along with the cloth itself to recover as much oil as possible.

Since 135 gm fruit and 450 gm oil was used, the strength of the final extract is  $135/450 = 30\%$ .

**Designate this extract as PUGR-T-30 Dilute a small portion of it in three other bottles with more sesame oil to make the strengths of 1, 5 and 10.**

With an identical procedure as above prepare the pomegranate super-extract for seeds with juice. Since we have 90 gm in 450 gm sesame oil, the final extract will be **PUGR-JS-20**. Dilute this with an equal wt. of sesame oil to make PUGR-JS-10 for use.

In case of Pomegranate, the three strengths needed for exploration are 1, 5 and 10.

For dispensing the oil, small – 5 ml or 30 ml bottles with an insert with nozzle are required. Such bottles are available in the market. Filling such small bottles requires an S.S. pourer with a sharp beak,

**Storage:** The super-extracts bottles must be tightly closed. The super-extracts can be stored in a cabinet, away from heat and light. Similarly, the bottles for dispensing can be stored in boxes. With such a storage, the shelf life is at least 5 years. If storage is not done properly – bottles exposed to UV /lids not tightly closed, the oils polymerize and turn viscous. Occasionally, rancidity may also develop. Such oils must be discarded.

## **6.0 CURIOSITY DRIVEN EXPLORATIONS:** The following applications have been explored so far using PUGR-T- 1 and PUGR-JS-10

### **Explorations with PUGR-T-1**

<b>PROBLEM</b>	<b>DOSAGE</b>	<b>COMMENTS</b>
<b>Stomach Cramps</b>	<b>1 dr</b>	Stomach pain immediately after meal stops within 5 minutes
<b>Sore Throat</b>	<b>2 dr twice</b>	Throat pain/irritation gone
<b>Acidity – post meal</b>	<b>2 dr BD</b>	With continuous use, acidity gone
<b>Insect Bite -</b>	<b>4 drops externally twice</b>	Rash, Burning and edema gone in 24 hours
<b>Skin – Facial Blemish</b>	<b>2 dr BD 4 weeks</b>	In three weeks, black heads on the face fell off.
<b>Skin Quality</b>	<b>2 dr BD ongoing</b>	After use for one month, rough skin has become soft indicating skin repair
<b>Skin-Infection</b>	<b>Pugr-T-5 topically</b>	Infection/Pustules on buttock eliminated

<b>FUTURE Exploration</b>	<b>Topical and Oral</b>	Explore with PUGR-T-5 or PUGR-T-10
<b>Skin –Facial</b>		Use on Pimples, Acne, etc
<b>Skin – Sun Allergy</b>		Outdoor sports and as a sun-screen
<b>Skin – Auto-immune Diseases</b>		Eczema, Psoriasis, Scleroderma and other inflammatory skin diseases.
<b>Skin-Repair</b>		Post- bruises and burns
<b>Skin/Anal Itching</b>		Rashes, Hives, Burning, Itching
<b>Hair</b>		Dandruff
<b>Allergies – Food</b>		Dose response for allergy due to different foods

#### Use of PUGR-JS-10

<b>PROBLEM</b>	<b>DOSAGE</b>	<b>COMMENTS</b>
<b>B.P.</b>	<b>1 Dr BD</b>	<b>Dose of BP Medicine reduced</b>
<b>Blood Vessel Walls</b>	<b>1 Dr BD and topically</b>	<b>Itching stopped. Some indication of relief from varicosity</b>
<b>FUTURE EXPLORATIONS</b>	<b>ORAL AND TOPICAL</b>	<b>Dose response needs to be established Start exploration with PUGR-JS-10</b>
<b>Wrinkles and pouches below eyes</b>	<b>ORAL and Topical</b>	
<b>Sagging Breasts</b>	<b>Topical/Oral</b>	<b>Longer Term Effect</b>
<b>B.P.</b>	<b>Oral</b>	<b>Longer term effects</b>

<b>Heart</b>	<b>Oral</b>	<b>Post-angiography/By-pass – dose response</b>
<b>Lipid Profile</b>	<b>Oral</b>	<b>Check effect on HDL, LDL, TG</b>
<b>Cartilage /Ligament</b>	<b>Oral/Topical /SuJok</b>	<b>Cartilage /Ligament repair?</b>
<b>Alzheimer</b>	<b>Oral/SuJok</b>	<b>Effect on memory</b>

## 7.0 DOCUMENTATION AND EXPERIENCE SHARING

For the “Katonics Discovery Circle” to be successful and useful to the entire community, proper documentation and sharing protocols are absolutely essential. This work is time consuming. However, even if we have half a dozen well documented cases, they make a much stronger impact than scores of loosely anecdotal cases. This is not just to fend of critics but to make us go purposefully in the right direction of finding and validating applications. I urge you most sincerely to start this documentation with yourself and your family and then extend it to your friends who may be willing volunteers. .

**Documentation Formats.** I will send via internet a Summary Excel format and also a Detailed Excel format for more complex cases. Each format will clearly indicate the data fields which have to be filled in.

The summary format will have Name, Date of Birth,, Name of Observer, Location, Keyword description of the problem, A slightly detailed description of the problem, Current medicines/diet issues, Suggested dosage and key diet advice, start date, Fortnightly keyword progress

For more complex cases requiring several months of treatment , monitoring of several parameters and also a fair amount of lab support, a detailed format will be sent.

**Experience Sharing :** Initially, you can send me an updated summary and detailed formats once a month.

**Future Direction:** It is intended to develop a Moodle Knowledge Management Portal for acquiring and searching and sharing such content across the community. As and when such developments take place, you will be informed where and how to use these developments. Such development will then also become available on my website [www.katonics.co.in](http://www.katonics.co.in).







