Jebunnaher Chowdhury

Section D202

Greater NY Dental Meeting Assignment

Part 1:

For about seven years now, I have worked at a dental office and every year my boss has provided tickets for us to attend the Greater NY Dental Meeting. However, I have never attended until this year. Even though it was mandatory to go, it was such a great experience and I will definitely go more often. There was a vast amount of information presented that not only related to dentistry but dental hygiene as well. From local colleges, to international colleges, the topics discussed were ones I would have never related to dentistry. With all the posters being presented, there were so many which I felt were worthy of first prize, including the ones from City Tech.

Every poster deserves great acknowledgement, but the one poster in my opinion that deserved first prize was The Potential Use of Turmeric for the Prevention of Periodontal Diseases. This topic was discussed B. Mashkulli, W. Rodriguez, and T. Schedrina, who are seniors in our dental hygiene program. It was very well put together, presented thoroughly, and provided all information needed to ensure their conclusion was accurate. The poster itself was appealing. The introduction, definition, research, conclusion, and bibliography were all organized and there were pictures as well. Once I saw the pictures of the turmeric, it caught my eye because in my culture we use turmeric for cooking and dye purposes, so seeing it can help dentally was intriguing. Generally speaking, if the posters did not include pictures, they would not have caught my attention as fast because I am a very visual person. Having held my attention, I approached the students for more information.

The information these students discussed with me, taught me turmeric had more benefits than thought. Once I approached them, they were all very welcoming and asked if they can provide me with information on their topic. They began with explaining what the poster was about and what they were researching about. Each of them took turns discussing the various aspects of the topic. What turmeric is, what periodontal disease is, how both relate, the research they did, and the conclusion was all presented on the poster but through their communication, our understanding was more in depth now. Any questions people had they answered thoroughly and did not have to turn to the poster for information, which shows they were very knowledgeable on their research. Visually, the poster caught my attention, but the presenters and the information kept my interest in the topic.

Being Bengali, I grew up eating food that was made with turmeric and to me it was just a form of seasoning for food. Finding out something I believed to be just a seasoning can help dentally, actually surprised me. An aspect of my culture relating to the profession I was studying made was very interesting and made me want to know more about it. The first part of the poster presented information on what turmeric is. Just as in my country, the students defined it as a bright yellow powder that’s used for flavoring and has been used for centuries for medicinal purposes (Mashkulli, Rodriguez, Schedrina). In addition to that, it aids in preventing heart disease and reduction of joint inflammation. For the project, the students were investigating using turmeric to possibly prevent periodontal disease. Next, they defined periodontal disease, which begins as gingivitis. Having bad oral hygiene leads to gingival inflammation and causes bleeding. This leads to periodontal disease, which is the main cause of tooth loss. Through their research, they wanted to present that using turmeric dentally along with professional treatment can prevent the disease.

After providing definitions, the poster presented the 'potential use of turmeric in dentistry' (Mashkulli, Rodriguez, Schedrina). Here the students’ research was presented. They found studies that resulted in the use of turmeric being free of negative side effects, such as staining, as compared to traditional mouthwash, and it reduced destructive factors of inflammation, such as with periodontal inflammation. Finally, from these they were able to conclude that not only does using turmeric dentally help prevent inflammation, as with periodontal disease, but there should be further research done on this topic so we as a public can begin to use it to aid in our oral hygiene care.

Although, originally I thought turmeric was just a sort of spice, through the poster I now learned it was much more. Turmeric was used to treat wounds, infections and colds, and now it is being known to have anti-inflammatory properties. Thus, turmeric can help dentally through this property. Periodontal disease begins with gingivitis, which leads to inflammation of the gingiva, which begins to bleed. The turmeric has anti-inflammation properties and if used during regular oral hygiene care can help prevent gingival inflammation. With proper oral care, the help of a professional, and the turmeric, periodontal disease can be prevented thus improving the oral hygiene for all. These students have taken something from the kitchen and related it to having a positive effect dentally. Periodontal disease causes loss of teeth in many people and the main goal is to prevent this through maintaining a healthy oral cavity, so through using turmeric it can help. The Potential use of Turmeric for the Prevention of Periodontal Disease was worthy of first prize.

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Section D202

GNYDM

Part 2: Reference

* Aggarwal, & Harikumar. (2009). Potential therapeutic effects of curcumin, the anti-inflammatory agent, against neurodegenerative, cardiovascular, pulmonary, metabolic, autoimmune and neoplastic diseases. *International Journal of Biochemistry and Cell Biology,* *41*(1), 40-59. <https://doi.org/10.1016/j.biocel.2008.06.010>

* Behal, R., Gilda, S., & Mali, A. (2012). Comparative evaluation of 0.1% turmeric mouthwash with 0.2% chlorhexidine gluconate in prevention of plaque and gingivitis: A clinical and microbiological study. *Journal of Indian Society of Periodontology,* *16*(3), 386-391. <http://www.jisponline.com/text.asp?2012/16/3/386/100917>

* Jurenka, Julie S. (2009). Anti-inflammatory properties of Curcumin, a major constituent of Curcuma longa: A review of preclinical and clinical research.(Report). *Alternative Medicine Review,* *14*(2), 141-53. <http://new.altmedrev.com./information/about-amr>

## [The International Journal of Biochemistry & Cell Biology](http://www.sciencedirect.com/science/journal/13572725)

[Volume 41, Issue 1](http://www.sciencedirect.com/science/journal/13572725/41/1), January 2009, Pages 40-59

# Review

# Potential therapeutic effects of curcumin, the anti-inflammatory agent, against neurodegenerative, cardiovascular, pulmonary, metabolic, autoimmune and neoplastic diseases

Author links open overlay panel[Bharat B.AggarwalKuzhuvelil B.Harikumar](http://www.sciencedirect.com/science/article/pii/S1357272508002550?via%3Dihub#!)

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## Abstract

Although safe in most cases, ancient treatments are ignored because neither their active component nor their molecular targets are well defined. This is not the case, however, with curcumin, a yellow-pigment substance and component of turmeric (*Curcuma longa*), which was identified more than a century ago. For centuries it has been known that turmeric exhibits anti-inflammatory activity, but extensive research performed within the past two decades has shown that this activity of turmeric is due to curcumin (diferuloylmethane). This agent has been shown to regulate numerous transcription factors, cytokines, protein kinases, adhesion molecules, redox status and enzymes that have been linked to inflammation. The process of inflammation has been shown to play a major role in most chronic illnesses, including neurodegenerative, cardiovascular, pulmonary, metabolic, autoimmune and neoplastic diseases. In the current review, we provide evidence for the potential role of curcumin in the prevention and treatment of various proinflammatory chronic diseases. These features, combined with the pharmacological safety and negligible cost, render curcumin an attractive agent to explore further.

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| **ORIGINAL ARTICLE** |

**Comparative evaluation of 0.1% turmeric mouthwash with 0.2% chlorhexidine gluconate in prevention of plaque and gingivitis: A clinical and microbiological study**

[**Amita M Mali**](http://www.jisponline.com/searchresult.asp?search=&author=Amita+M+Mali&journal=Y&but_search=Search&entries=10&pg=1&s=0)**1,** [Roobal Behal](http://www.jisponline.com/searchresult.asp?search=&author=Roobal+Behal&journal=Y&but_search=Search&entries=10&pg=1&s=0)1**,** [Suhit S Gilda](http://www.jisponline.com/searchresult.asp?search=&author=Suhit+S+Gilda&journal=Y&but_search=Search&entries=10&pg=1&s=0)

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| Date of Submission | 14-Apr-2011 |
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| Date of Web Publication | 12-Sep-2012 |

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|  **Abstract** |   |  |

**Background:** The aim of our clinical trial was to assess the efficacy of 0.1% turmeric mouthwash as an anti-plaque agent and its effect on gingival inflammation and to compare it with 0.2% chlorhexidine gluconate by evaluating the effect on plaque and gingival inflammation and on microbial load. **Materials and Methods:** 60 subjects, 15 years and above, with mild to moderate gingivitis were recruited. Study population was divided into two groups. Group A-30 subjects were advised chlorhexidine gluconate mouthwash. Group B-30 subjects were advised experimental (turmeric) mouthwash. Both the groups were advised to use 10 ml of mouthwash with equal dilution of water for 1 min twice a day 30 min after brushing. Parameters were recorded for plaque and gingival index at day 0, on 14 th day, and 21 st day. Subjective and objective criteria were assessed after 14 th day and 21 st day. The N-benzoyl-l-arginine-p- nitroanilide (BAPNA) assay was used to analyze trypsin like activity of "red" complex microorganisms. **Results:** On comparison between chlorhexidine and turmeric mouthwash, percentage reduction of the Plaque Index between 0 and 21 st day were 64.207 and 69.072, respectively (*P*=0.112), percentage reduction of Gingival Index between 0 and 21 st day were 61.150 and 62.545 respectively (*P*=0.595) and percentage reduction of BAPNA values between 0 and 21 st day were 42.256 and 48.901 respectively (*P*=0.142). **Conclusion:** Chlorhexidine gluconate as well as turmeric mouthwash can be effectively used as an adjunct to mechanical plaque control in prevention of plaque and gingivitis. Both the mouthwashes have comparable anti-plaque, anti-inflammatory and anti-microbial properties.

**Title**

Anti-inflammatory properties of Curcumin, a major constituentof Curcuma longa: a review of preclinical and clinical research.(Report)

**Author**

[Jurenka, Julie S.](http://onesearch.cuny.edu/primo-explore/search?query=creator%2Cexact%2CJurenka%2C%20Julie%20S.%2CAND&tab=default_tab&search_scope=everything&sortby=rank&vid=ny&lang=en_US&mode=advanced&offset=0)

**Is Part Of**

Alternative Medicine Review, June, 2009, Vol.14(2), p.141(13)

**Subjects**

[Curcumin -- Health Aspects](http://onesearch.cuny.edu/primo-explore/search?query=sub%2Cexact%2CCurcumin%20--%20Health%20Aspects%20%2CAND&tab=default_tab&search_scope=everything&sortby=rank&vid=ny&lang=en_US&mode=advanced&offset=0)

[Curcumin -- Properties](http://onesearch.cuny.edu/primo-explore/search?query=sub%2Cexact%2C%20Curcumin%20--%20Properties%20%2CAND&tab=default_tab&search_scope=everything&sortby=rank&vid=ny&lang=en_US&mode=advanced&offset=0)

[Anti-inflammatory Agents -- Properties](http://onesearch.cuny.edu/primo-explore/search?query=sub%2Cexact%2C%20Anti-inflammatory%20Agents%20--%20Properties%20%2CAND&tab=default_tab&search_scope=everything&sortby=rank&vid=ny&lang=en_US&mode=advanced&offset=0)

[Cancer Research](http://onesearch.cuny.edu/primo-explore/search?query=sub%2Cexact%2C%20Cancer%20Research%2CAND&tab=default_tab&search_scope=everything&sortby=rank&vid=ny&lang=en_US&mode=advanced&offset=0)

**Description**

Curcuma longa (turmeric) has a long history of use in Ayurvedic medicine as a treatment for inflammatory conditions. Turmeric constituents include the three curcuminoids: curcumin(diferuloylmethane; the primary constituent and the one responsible for its vibrant yellow color), demethoxycurcumin, and bisdemethoxycurcumin, as well as volatile oils (tumerone, atlantone, and zingiberone), sugars, proteins, and resins. While numerous pharmacological activities, including antioxidant and antimicrobial properties, have been attributed to curcumin, this article focuses on curcumin's anti-inflammatory properties and its use for inflammatory conditions. Curcumin's effect on cancer (from an anti-inflammatory perspective) will also be discussed; however, an exhaustive review of its many anticancer mechanisms is outside the scope of this article. Research has shown curcumin to be a highly pleiotropic molecule capable of interacting with numerous molecular targets involved in inflammation. Based on early cell culture and animal research, clinical trials indicate curcumin may have potential as a therapeutic agent in diseases such as inflammatory bowel disease, pancreatitis, arthritis, and chronic anterior uveitis, as well as certain types of cancer. Because of curcumin's rapid plasma clearance and conjugation, its therapeutic usefulness has been somewhat limited, leading researchers to investigate the benefits of complexing curcumin with other substances to increase systemic bioavailability. Numerous in-progress clinical trials should provide an even deeper understanding of the mechanisms and therapeutic potential of curcumin.

**Language**

English

**Identifier**

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Section D202

GNYDM Assignment

Part 3:

Attending the Greater NY Dental Meeting for the first time can be very over whelming for anyone, as it was for me. Entering the Jacob Javits Center, I felt like an ant, where everything was so much bigger than me. There were people everywhere, signs all over, different floors, and so many different sections of each floor. As I looked for my classmates, I realized we were all on different floors every though we all thought we entered the same place. Right then, I was already confused. However, walking around for a few minutes I was able to figure things out. At first I thought attending this meeting would not be fun, but I was very wrong. I felt excited and intrigued the whole time and I stayed longer than I expected. There was so much to learn about ordinary things that can benefit dentally not only from local students, but international students as well. It was refreshing being able to see and hear students in other countries working towards the same profession as me and conducting research on things we may not have available here in the U.S.

There were so many scientific posters, presentations, and exhibitions for dental materials throughout the day. Having learned a vast amount of information from the posters, my classmates and I moved on to the exhibitions. It was like walking into a different world. Gloves, instruments, scrubs, masks, and dentifrice companies presenting were all in one area. I attended all of the shows they offered to get an insight on the different products available to the public. One thing I learned was about stannous fluoride, which helps enamel resist bacteria. Not only did I watch their presentations, I participated in the little activities they had, where I won toothpaste. The overall experience I had at the GNYDM was absolutely wonderful. I gained more information than I thought I would all while enjoying my time spent there. I am glad I went and cannot wait to go again next year.