**PRANAV CHHALIYIL**

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**Education**

Senior at Maharishi High School, Fairfield, Iowa

**Independent Scientific Research** 2013 – current

Studied the effect of oral cleaning and unrefined sugar on Dental microbiota. This helps in maintaining oral hygiene, prevent oral diseases and connected systemic diseases like diabetes, hypertension, kidney diseases and cancer.

**Publication in Peer-reviewed Scientific Journals (first Author)**

1. Submitted to Journal of Oral Microbiology, 2018

**Pranav Chhaliyil1**, Kael F. Fischer, Pradheep Chhalliyil, Bernd Schoel

Bedtime oral cleaning reduces dental damaging microbiota

2. Submitted to BHC Oral Health, 2018

**Pranav Chhaliyil1**, Kael F. Fischer, Pradheep Chhalliyil, Bernd Schoel

Frequent Oral Cleaning Changes Microbiota In The Dental Biofilm

3. Submitted to Journal of Dental Materials, 2018

**Pranav Chhaliyil1**, Pradheep Chhalliyil, Bernd Schoel

Safe and efficient use of Charcoal as Dentifrice

 4. Submitted to BDJ, 2018

**Pranav Chhaliyil1**, Matt Pederson Kael F. Fischer, Pradheep Chhalliyil, Bernd Schoel

Effect of Sugar Polyphenols on Microbiota in saliva and dental biofilm

5. To be Submitted to Scientific Reports, 2019 **Pranav Chhaliyil1**, and Bernd Schoel

**Commercial Output of the work**

Launched **Nano-Charcoal based products for oral cleaning and cosmetic products** (www.giftcharcoal.com).

**Scientific & Clinical Conferences**

**2019**    [Intel International Science & Engineering Fair Finalist](https://finalistquestionnaire.societyforscience.org/projectlist)

**2019**     [International GENIUS Olympiad 2019](https://www.geniusolympiad.org/) Finalist "an international high school project competition about environmental issues".

**2019**    [Speaker at 2019 Plant & Animal Genome Conference (PAG](https://plan.core-apps.com/pag_2019/event/b049a312ab5632980dd9cdba2f55464b)), San Diego, USA (Jan 2019). “Effect of Sugar polyphenols on Oral Microbiota” Session: The Analysis and Role of the Microbiome, Sunrise - Meeting House, Jan 12 9:55 AM

**2018**     [Poster at 2019 Plant & Animal Genome Conference (PAG)](https://plan.core-apps.com/pag_2019/abstract/6e070c0ebde6a5b908f9f08fb2edf257) , San Diego, USA (Jan 2019). “In vitro Effect of Sugarcane Polyphenols on Oral Microbiota” Pranav Chhaliyi

**2017** Invited Presenter in Table Clinics at the Annual Iowa Dental Association Meeting, Cedar Rapids, Iowa (5/06/17)

2017 Presented poster at Plant & Animal Genome Conference (PAG), San Diego, USA (Jan 2016). ["A Rapid Method for Extraction and Purification of DNA from Dental Plaque, Tongue Scraping and Saliva Using IDeal Kit"](https://app.core-apps.com/pag_2017/abstract/0e30845baf7bd6425752f75b466ad89d) Pranav Chhalliyil and Bernd Schoel.

2016 [Invited Presenter in Table Clinics at the Annual Iowa Dental Association Meeting, Des Moines, Iowa](https://photos.google.com/share/AF1QipPmeNqPHchXxa8Mz7hVTlr2jl_IxIO4OUyUXTGYNkGaCd9sLvp02JCliU48p61biw/photo/AF1QipPttO1HEiHDFQmwx_pRiIIwn4_EmOKEnUM-UxS6?key=WFlXVUtDQWZuVktvT3FDa0NiZGpJOXU5aW9XaUZB) (5/07/16)

2016 [Presented poster at Plant & Animal Genome Conference (PAG)](http://www.intlpag.org/), San Diego, USA (Jan 2016). "[IDeal Fast ID Kit for DNA Extractions from Saliva Samples](https://pag.confex.com/pag/xxiv/webprogram/Paper18802.html)" Pranav Chhalliyil and Bernd Schoel.

**Awards and Honors**

2019     [Iowa](https://student.societyforscience.org/regeneron-sts-2019-scholars) Governor’s Scholar "selected by their high schools as their highest academic achievers." (IAHSSA).

2019     [Regeneron Science Talent Search 2019 Semifinalist](https://student.societyforscience.org/regeneron-sts-2019-scholars) "the nation’s oldest and most prestigious science and math competition for high school seniors" (Society for Science).

2018  Biotechnology Institute STEM Ambassador to motivate and promote STEM education to K-8 students across the U.S.

2018 National Junior Science and Humanities Symposium 2018 Finalist (competing May 2-5 at Huntsville, MD).

2018 Iowa Junior Science and Humanities Symposium 2018 3rd Place.

2017 International BioGENEius Challenge GENEPool Competition Winner

2017 International BioGENEius Challenge Finalist

2017 BioGENEius Challenge National Winner

2017 INTEL International Science & Engineering Fair Microbiology Category 3rd place

2017 Iowa BioGENEius Challenge 2017 Winner

2017 INTEL International Science & Engineering Fair Finalist

2017 Eastern Iowa Science & Engineering Fair Biology Division 1st place

2016 Invited Presenter at the Fairfield Rotary Club (6/24/16)

2016 [Maharishi School Alexander Grace Award](https://drive.google.com/file/d/0B_tyMjqYdo-BWnFfNlc1bU5KUWs/view?usp=sharing) (6/09/16) for exemplifying the highest ideals of Maharishi School: kindness, courage, integrity, and wisdom.

2016 [INTEL International Science & Engineering Fair Microbiology Category 4th place](https://www.societyforscience.org/content/press-room/intel-isef-2016-grand-award-winners)

2016 [INTEL International Science & Engineering Fair Finalist](http://www.maharishischooliowa.org/about-us/school-news/grand-champion-honors-at-state-science-fair/)

2016 [Iowa State Science & Technology Fair Senior Division Grand Champion](http://www.sciencefairofiowa.org/awards-and-scholarships.html)

2016 [Eastern Iowa Science & Engineering Fair Biology Division 1st](http://www.eisef.org/photos_champions.htm) place

2016 [Received the Highest Rating for Short Films at Iowa High School Speech Association State (Feb 2016)](https://www.youtube.com/watch?v=2iqtgB4cUOA&t=7s)

2016 [Received the Highest Rating for Short Films at Iowa High School Speech Association Sub-State (Jan 2016)](https://www.youtube.com/watch?v=5aJSa76CxLQ)

2015 [Broadcom Masters Semi-Finalist](https://student.societyforscience.org/broadcom-masters-2015-semifinalists)

One among the 300 semifinalists from the 6000 Broadcom winners who were the top 10% in the country from 60,000 Science Fair students.

2015 [3M Discovery Young Scientist Challenge Iowa State Merit Winner](http://www.youngscientistchallenge.com/state-merit-winners)

2015 [INTEL International Science & Engineering Fair Student Observer](http://www.maharishischooliowa.org/about-us/school-news/grand-champion-honors-at-state-science-fair/)

2015 [Iowa State Science & Technology Fair Junior Level Grand Champion](http://www.sciencefairofiowa.org/awards-and-scholarships.html)

2015 [Iowa State Science & Technology Fair Junior Level Discovery in Science Award](http://www.sciencefairofiowa.org/awards-and-scholarships.html)

2015 [Eastern Iowa Science & Engineering Fair Biology Division Junior Champion](http://www.eisef.org/photos_champions.htm)

2015 Maharishi Middle School Excellence Award

2014 [INTEL International Science & Engineering Fair Student Observer](http://www.maharishischooliowa.org/about-us/school-news/pranav-chhalliyils-trip-to-the-intel-international-science-and-enginee)

2014 [Eastern Iowa Science & Engineering Fair Biology Division Junior Champion](http://www.eisef.org/photos_champions.htm)

**Community Service**

2018    [Conducted a Research Science Fair (3/10/18)](file://C:\Users\pradh\Downloads\2018Â %20Â Â Conducted%20a%20Research%20Science%20FairÂ (3\10\18)%20and%20provided%20prizes%20to%20participating%20middle%20school%20students,%20with%20Grand%20Awards%20to%20the%20best%20projects%20in%20the%20field%20of%20Language,%20Plant%20Science,%20Behavioral%20Science,%20and%20Human%20Body%20Functioning.%20The%20st) and provided prizes to participating middle school students, with Grand Awards to the best projects in the field of Language, Plant Science, Behavioral Science, and Human Body Functioning. The students chose a topic/issue of their choice relating to their village and conducted research experiments and analysis for 10 weeks.

2017 Raised $16,000 (USD) to rebuild a school destroyed by the 2016 Tamil Nadu Cyclone

2017 Established a pre-primary school in Porayar, Tamil Nadu, India, providing Montessori and Uni5 Education to poor children free of cost.

2017 Established a Culture Heritage Center, preserving Indian culture and arts at Andavar Porayar School, Tamil Nadu, India

2016 Built a Science Lab (7/23/16 – 7/30/16) and taught 100 middle school students the scientific method and motivated them to do research using the lab I built at Andavar Porayar School, Tamil Nadu, India.

2016 Conducted a two-day Dental Awareness Camp (7/22/16) and provided prizes to 100 middle school children, with special awards to the students with the best microbiome to motivate them to do “Charcoal Finger Gum Rubbing and Tongue Cleaning” at Bed Time for good oral hygiene at Andavar Porayar School, Tamil Nadu, India.

2015 Conducted a one-day Dental Awareness Camp and provided T-shirts to 90 middle school children to motivate them to do “Finger gum rubbing & Tongue cleaning at Bed Time for good oral hygiene” at Andavar Porayar School, Tamil Nadu, India.

2014 Conducted a one-day Dental Awareness Camp for 100 middle school children on the “Importance of Bed Time Brushing for disease prevention” at Andavar Porayar School, Tamil Nadu, India.

**LAB Skills**

* DNA Extraction
* qPCR and DDPCR Analysis
* Statistical Data Analysis (Annova, Post Hoc Analysis, LDA, LEfSe)
* ELISA Analysis
* Metagenomic 16s DNA Sequencing
* BLAST

2016 Interned at The Indian Institute of Science (8/21/16 – 8/22/16) and learned and performed ELISA Analysis to 40 blood samples, looking for inflammation in the samples. The first high school intern at ISSC (est. 1909)

**Computer Skills**

* HTML & CSS
* Android Programming
* Microsoft office
* Audio/Video Editing

**Public Speaking Skills**

* Radio shows – Interviewed more than 70 professionals for KRUU-FM, Fairfield, Iowa (2014-15).
* Performing Skits on Indian Mythology (19 skits) in cultural celebrations in Iowa
* PPT presentations on Vedic festivals
* Vedic recitation

**Community Service**

* Teaching school children in India science and English through Skype (2014-2016)

**Vocal & Musical Instruments**

* Indian Carnatic (11 years)
* Western (8 years)
* Piano, Tabla, (5 years)

**Sports**

Tennis, Basketball, Soccer, Badminton, Track

**Hobbies**

Image Consulting, Cooking, Traveling, Photography, Painting (oil painting, glass painting, Indian Mural painting), Fashion Designing

Poem titled "Fame" selected in the 2017 National Poetry Contest and published by The America Library of Poetry in a book titled "Treasured"

**Languages**

English, Malayalam, Tamil, Hindi, Spanish (currently learning), Arabic (currently learning)