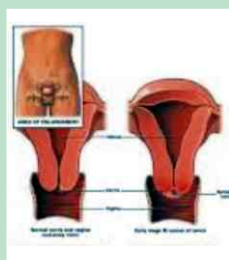
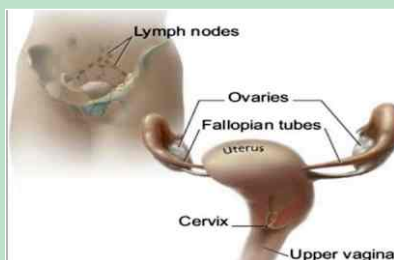




National Conference on Human papillomavirus and Control of Cervical Cancer - Current Scenario

Sponsored by
MPCST & UGC, Bhopal and
Society of Pharmaceutical Science and Research
16 - 17th March 2013

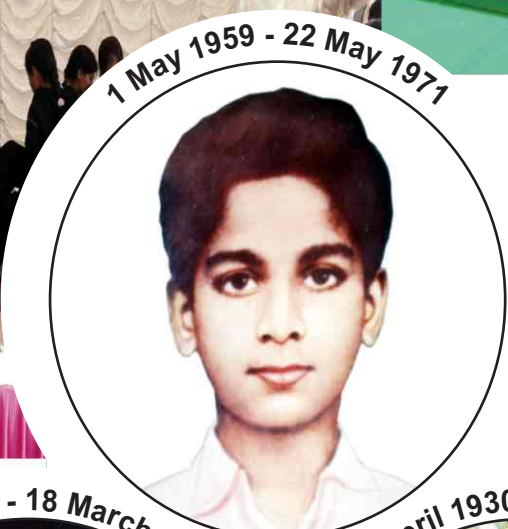


Organized by
COLLEGE OF LIFE SCIENCES AND
CANCER HOSPITAL & RESEARCH INSTITUTE, GWALIOR, MP

Souvenir



YOUR MEMORY WILL NEVER DIE



National Conference on
Human papillomavirus and Control of Cervical Cancer - Current Scenario

16 - 17th March 2013

-Editor in Chief -
Dr. Archana Shrivastav

∞Editors ∞

Ms. Shuchi Kaushik

Ms. Deepali Shukla

Ms. Richa Sharma

Organized By
College of Life Sciences

Cancer Hospital and Research Institute Campus, Gwalior [M. P.]

Sponsored By

MPCST & UGC, Bhopal

International Journal of Pharmaceutical Science & Research

Special Lady

You're a lady with a lot more than fashion,
Understands others and shows lots of compassion.

You're never afraid to persevere,
Placing family, before your career.

Joy is something you always display,
Even when times, are a little bit grey.

Please keep in mind, that you're not alone,
If you wish to talk, just pick up the phone.

I hope you always continue to dream,
You are fantastic, you are supreme.

There's absolutely nothing, you can't achieve,
That's what I honestly and sincerely believe.

You Can

Cancer is something that we all fear,

You're not alone, love is near.

It must be very difficult to cope,

Your strongest therapy is your hope.

You have the strength to defeat,

From your head to your feet.

Stick with it, never surrender,

By your side, we're your defender.

Deep inside we sense your power,

Our blessings we'd like to shower.

We're so proud of all that you do,

We know you can, we love you!

Tribute to Founder Trustee Sir

Born in an underprivileged family, orphaned at the age of 8 years, struggle became not a part but a way of life. He surmounted it all and marched dauntingly to live a legendary life that cannot be replicated. With his perseverance he graduated in Commerce and finished his PG in Law, followed by economics.

Though he was well established as a successful income tax lawyer, his social interests pulled him into politics and he was elected MLA for the first time in 1967. Due to his selfless work and unrelenting loyalty he was re-elected in 1972, 1977, 1980 and 1990. In his reign he was nominated President of Loklekha Samiti in 1980 and during 1970-80 held vital ministries for health, housing and public contact and during 1990-92 for home, transport, jail, irrigation, Narmada Valley Development and Ayukta.

His astute guidance and expertise has been integral to the consolidation and implementation of various social welfare services. In 1971, he lost his only son due to deadly disease, Cancer. Instead of moaning over the aftermath, he took it upon himself to make the remote, expensive care, cost effective and easily available and accessible at the doorstep to the common man of Central India. He founded Jan Vikas Nyas and Cancer Hospital and Research Institute. His ceaseless efforts resulted in recognition of Institute as the Regional Centre for Cancer Care by the Government of India.

In 1990, College of Life Sciences was started, offering multiple courses at undergraduate and postgraduate level. College of Nursing that began in 1992 is now the most prestigious institute in the country whose nurses are coveted both in India and Abroad.

As of today, the group of institutions embodied in CHRI, is providing education to many students of Life Sciences and Nursing, health services to Cancer patients, employment to many people and has rightly given Gwalior its position on map. His solid mission, focused attitude, decisive leadership led to the comprehensive services being provided by the Institute and has set a sterling example of effective and judicious use of organizational funds.

His clarity of vision and direction, commitment to the pursuit of social service, indigenous knowledge, and ability to balance his responsibility as administrator, politician and social worker made him accomplish such milestones and brought him amongst most prominent social worker of the region. Through his actions he has gained the respect of people and leaders at all levels. His work has brought him wide acclaim and inspired his peers and subordinates to strive for the maximum achievements. Late Shri Shitla Sahai ji had amalgamated the meritorious work requiring many a lives into one of his own and that makes it one of its kinds.



राम नरेश यादव



राजभवन
भोपाल—462 052

08 मार्च, 2013

संदेश

यह जानकर प्रसन्नता हुई कि कॉलेज आफ लाइफ साइंस, केसर अस्पताल और रिसर्च इन्स्टीट्यूट, ग्वालियर द्वारा 16'17 मार्च 2013 को राष्ट्रीय कांफ्रेंस का आयोजन किया जा रहा है। इस अवसर पर स्मारिका प्रकाशन किया जा रहा है।

यह आम धारणा है कि कैंसर असाध्य रोग है इस धारणा को दूर करना आवश्यक है। यदि ठीक समय पर पता लग जाय तो इसका इलाज किया जा सकता है। कैंसर रोग क्या है और इसे कैसे रोका जा सकता है इसको आम लोगों तक पहुंचाने की आवश्यकता है। इस घातक रोग से तभी लड़ा जा सकता है जब लोगों में जागरूकता पैदा हो।

मुझे आशा है कि कांफ्रेंस में डाक्टरों और विषय विशेषज्ञों के आपसी विचार-विमर्श से कैंसर रोग के सस्ते और त्वरित इलाज पर सार्थक निर्णय निकल सकेंगे। स्मारिका में प्रकाशित लेखों से लोगों में कैंसर रोग से बचने के लिए सावधानियों और प्राथमिक इलाज के बारे में जानकारी मिल सकेगी।

शुभकामनाएं।

(राम नरेश यादव)
(राम नरेश यादव)



सत्यमेव जयते

डॉ विश्व मोहन कटोच
एम डी, एफ एन ए एससी, एफ ए एम एस, एफ ए एससी, एफ एन ए
सचिव, भारत सरकार
(स्वास्थ्य अनुसंधान विभाग)
स्वास्थ्य एवं परिवार कल्याण मंत्रालय एवं
महानिदेशक, आई सी एम आर
Dr. Vishwa Mohan Katoch
MD, FNASc, FAMS, FASc, FNA
Secretary to the Government of India
(Department of Health Research)
Ministry of Health & Family Welfare &
Director-General, ICMR



भारतीय आयुर्विज्ञान अनुसंधान परिषद
(स्वास्थ्य अनुसंधान विभाग)
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
पी. रामलिंगस्वामी भवन, अंसारी नगर
नई दिल्ली - 110 029 (भारत)

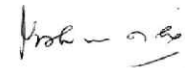
Indian Council of Medical Research
(Department of Health Research)
Ministry of Health & Family Welfare
V. Ramalingaswami Bhawan, Ansari Nagar
New Delhi - 110 029 (INDIA)

Message

I am happy to know that College of Life Sciences is going to organize a National Conference on "Human papillomavirus & Control of Cervical Cancer - Current Scenario" to be held on 16 & 17 March, 2013 in collaboration with Cancer Hospital & Research Institute, Gwalior

Morbidity and mortality due to cervical cancer in women is major problem in India. Association of HPV virus with this cancer and availability of prophylactic vaccine(s) suggests the need of in-depth debate on this issue. I am confident that this conference will provide an appropriate platform to discuss this topic.

I congratulate the organizers, invited guest speakers and all the delegates for participating in this important conference and wish a grand success for the event.


(V.M. Katoch)

प्रो. (डॉ.) एम. पी. कौशिक
उत्कृष्ट वैज्ञानिक/वैज्ञानिक 'एच' एवं
निदेशक
Prof. (Dr.) M. P. KAUSHIK
Outstanding Scientist / Sc. 'H' &
Director



सत्यमेव जयते

भारत सरकार, रक्षा मंत्रालय
रक्षा अनुसंधान तथा विकास संगठन
रक्षा अनुसंधान तथा विकास स्थापना
झांसी मार्ग, ग्वालियर - 474 002
Government of India, Ministry of Defence
Defence Research & Development Organisation
Defence Research & Development Establishment
Jhansi Road, Gwalior - 474 002

DO No.: DRDE/AD/00756

दिनांक/Date 8 March 2013

MESSAGE

Currently, cancer and infectious diseases remain the leading cause of death worldwide. The 21st century modern life style is equally contributing to the increased risk of cancer, diabetes, heart disease and infectious diseases (viruses in particular). The WHO projections say number of people affected by cancer would be doubled by 2030. The projections by Indian Council of Medical Research suggest that by 2020, India will have 20% increase in cancer cases.

Among the various forms of cancers, cervical cancer continues to be a significant health problem in all over the globe both in developing as well as in developed countries. Cervical cancer is estimated to cause around 2,74,000 deaths a year, approximately 80% of which occur in the developing world. India has the largest burden of cancer of the cervix of any country worldwide. Human Papilloma virus (HPV) is the one of the most important infectious causes of cancer. Of the 100 HPV types, 18 have been categorized as high-risk types (hr-HPV) or possible high-risk types for cervical cancer, while the rest are low-risk types (lr-HPV). HPV types 16 and 18 are said to account for approximately 70% of all cervical cancer cases in India.

In case of HPV associated cervical cancer, still we do not have an effective vaccine. A more holistic approach is required against management of cervical cancer. Further, emphasis on basic and applied research related to cancer and infectious disease is required in India. Cancer Hospital and Research Institute, Gwalior is imparting a crucial role in Cancer research and therapeutics.

I take this opportunity to congratulate the organizers and participants of this conference a very grand success.

M. P. Kaushik

Prof. Pramod K. Verma
प्रो. प्रमोद के. वर्मा
Director General महानिदेशक
Scientific Advisor, Govt. of M.P.
वैज्ञानिक सलाहकार, मध्यप्रदेश शासन



Madhya Pradesh Council of Science & Technology
मध्यप्रदेश विज्ञान एवं प्रौद्योगिकी परिषद्
Vigyan Bhawan, Nehru Nagar, Bhopal-462 003
विज्ञान भवन, नेहरू नगर, भोपाल- 462 003
☎ : 0755-2671800 Fax : 2671600
E-mail : dg@mpcost.nic.in
Web : www.mpcost.nic.in

5044/CST/13

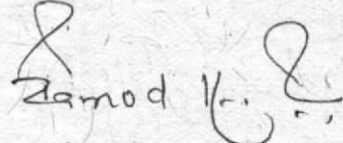
दिनांक 4 मार्च, 2013

-: संदेश :-

अत्यन्त हर्ष है कि कॉलेज ऑफ लाईफ साइन्सेस, ग्वालियर द्वारा 16-17 मार्च, 2013 को "National Conference on HPV and control of cervical cancer" विषय पर दो दिवसीय राष्ट्रीय संगोष्ठी का आयोजन किया जा रहा है।

मुझे विश्वास है कि संगोष्ठी में संबंधित विषय पर गहन चर्चा एवं विचार किया जायेगा, जिसका लाभ सम्मिलित प्राध्यापक, शिक्षक एवं विद्यार्थियों को मिलेगा।

में संरमलन का सफलता की भाँदक कामका करण हूँ।


(प्रो. प्रमोद के. वर्मा)

डॉ. अर्चना श्रीवास्तव
कॉलेज ऑफ लाईफ साइन्सेस
ग्वालियर-म.प्र.
(फैक्स 0751- 2336506)

डॉ. जी.एस. चौहान
शिक्षा अधिकारी

Dr. G.S. Chauhan
Education Officer




विश्वविद्यालय अनुदान आयोग
मध्य क्षेत्रीय कार्यालय
तवा कॉम्प्लेक्स (बिट्टन मार्केट) ई-5,
अरेरा कॉलोनी, भोपाल - 462 016 (म.प्र.)
UNIVERSITY GRANTS COMMISSION
CENTRAL REGIONAL OFFICE
TAWA COMPLEX (BITTAN MARKET), E-5,
ARERA COLONY, BHOPAL - 462 016 (M.P.)
TEL.: 0755-2467418, FAX: 0755-2467893
WEB SITE: www.ugc.ac.in

Message

I am happy to know that Life Sciences, Cancer Hospital & Research Institute, Gwalior, Madhya Pradesh is going to organize Two days National conference on “**Human Papillomavirus and control of Cervical Cancer-Current Scenario**” 16th to 17th March 2013 in the college campus. The topic of the Seminar is very relevant in the era of present century.

I hope that the conference would be very fruitful for all the subject experts. On behalf of UGC – CRO, I congratulate to Dr. Mr. Vivek Kumar Shrivastav, Organizing Secretary, Dr. Meenu Rai, Convener as well as the Principal of the college under whom dynamic guidance the college is organizing such type of academic event for the welfare & the betterment of the society including teachers & students community.

I wish the seminar a grand success.


04/03/2013
Dr. G. S. Chauhan
Education Officer



समीक्षा गुप्ता
महापौर
नगर पालिक निगम ग्वालियर



निवास : हेमसिंह की परेड
लश्कर, ग्वालियर (म.प्र.)
दूरभाष : 0751-2429204, 2438333
मोबाईल : 9993096655, 94257-90241

क्रमांक / स्टेनो / 2013 / 19

दिनांक
07.03.2013

संदेश

मुझे यह जानकर अत्यन्त प्रसन्नता है कि 16 एवं 17 मार्च 2013 को कॉलेज ऑफ लाईफ साइसेस ग्वालियर में नेशनल कान्फ्रेस का आयोजन होने जा रहा है। शैक्षणिक दृष्टि से ग्वालियर नगर म.प्र. में विशिष्ट स्थान रखता है। इस दृष्टि से नेशनल कान्फ्रेस का आयोजन निश्चय ही एक वैचारिक अनुष्ठान के रूप में प्रस्तुत होगा। म.प्र. में विकास की अपार सम्भावनाएँ हैं। विकास की इस यात्रा में विज्ञान से जुड़े हुए विषयों पर शोध और अनुसंधान अत्यंत आवश्यक हैं।

मुझे विश्वास है कि इस नेशनल कान्फ्रेस से म.प्र. के सभी शोधार्थी और अनुसंधानकर्ताओं को अपनी प्रतिभा प्रदर्शित करने का मौका मिलेगा।

मेरी ओर से नेशनल कान्फ्रेस के सफल आयोजन हेतु शुभकामनाएँ।

भवदीय

Smita Gupta
(समीक्षा गुप्ता)



पी. नरहरि
आई.ए.एम.
कलेक्टर एवं जिला मजिस्ट्रेट
ग्वालियर (म. प्र.)



☎ { : 0751-2446200 कार्यालय
: 0751-2373301 फ़ैक्स
: 0751-2446300 निवास
: 0751-2345601 फ़ैक्स
Website : <http://www.gwalior.nic.in>
E-mail : dmgwalior@mp.nic.in


अ. शा. पत्र क्र.
दिनांक 7-3-2013

शुभकामना संदेश

दिनांक 16 एवं 17 मार्च 2013 को कॉलेज ऑफ़ लार्ड्स साइंसेस, ग्वालियर में नेशनल सेमीनार का आयोजन तथा स्मारिका का प्रकाशन किया जा रहा है, यह अत्यंत हर्ष का विषय है। स्मारिका में विभिन्न वैज्ञानिक एवं तकनीकी शोध पत्रों, आमंत्रित व्याख्यानों आदि का समावेश शोधार्थियों के लिए अत्यंत महत्वपूर्ण है।

मुझे आशा ही नहीं अपितु पूर्ण विश्वास है कि आपके द्वारा आयोजित यह नेशनल सेमीनार वैज्ञानिकों, शिक्षकों, शोधार्थियों एवं अन्य प्रतिभागियों को गहन विवेचन का सुअवसर प्रदान करेगा एवं उन्हें अपने अनुसंधान कार्यों को और सर्वोच्च ऊँचाईयों तक ले जाने में सहायक होगा।

सेमीनार की सफलता के लिए हार्दिक शुभकामनाएं।


(पी. नरहरि)
कलेक्टर
जिला ग्वालियर (म.प्र.)



प्रो. आनंद मिश्र

डी. लिट्.
कुलसचिव

जीवाजी विश्वविद्यालय

ग्वालियर-474 011 म.प्र. (भारत)

दूरभाष : 0091-751-2341896, 2442801 (कार्यालय)

2442642 (निवास)

फैक्स : 0091-751-2341768

ई.मेल : registrar@jiwaji.edu

वेबसाइट : <http://www.jiwaji.edu/>

संदेश

यह जानकर अति प्रशन्नता हुई कि कॉलेज ऑफ लाईफ साइंसेस, ग्वालियर नेशनल कॉन्फेस “ह्यूमन पेपीलोमा वायरस एण्ड कन्ट्रोल ऑफ सर्वाइकल कैंसर-करन्ट सिनेरियो” का आयोजन करने जा रहा है। इस अवसर पर वैज्ञानिकों, शिक्षकों एवं विद्यार्थियों द्वारा दिये जाने वाले व्याख्यानों का सारांश भी पुस्तिका के रूप में संकलित किया जाना है। आपका यह प्रयास शोध विज्ञान के क्षेत्र में निःसंदेह एक प्रभावी स्वरूप प्रदान करेगा।

आपका यह कार्यक्रम सभी को लाभांविता करे, साथ ही शोधार्थी, पुस्तिका के माध्यम से नवीन शोध विषयों को जनमानस तक पहुंचायेगे तो अनेक भ्रान्तियों को समाप्त करने में मदद मिलेगी। इस अवसर पर मैं सभी को हार्दिक शुभकामनायें प्रेषित करता हूँ।


Registrar
Jiwaji University
Gwalior

OFFICE OF THE DEAN
G.R. MEDICAL COLLEGE, GWALIOR



Telephones { +91-751- 2403400
Office : 2403216
Fax : 2403403

E-mail : grmcgwa@sancharnet.in
Website : www.grmedicalcollege.org

No. 6230

Date 05/03/2013

Message

It gives me immense pleasure to know that College of Life Sciences, Cancer Hospital & Research Institute Gwalior(MP) is organizing National Conference on " Human Papillomavirus and Control of Cervical Cancer-Current Scenario" on 16th- 17th March 2013.

This Conference has more relevance today when Medical Science has to utilise the optimal and maximized benefits of advanced methodologies and techniques. I am sure this Conference shall provide a unique opportunity for the learned delegates, faculty members & students of various branches for Medical Science and create research aptitude. It will provide opportunities for sharing innovative ideas among each other and will help in identifying new emerging technologies in this challenging field.

I am confident that this conference will be rejuvenating event in your life & wish grand and fruitful success for the Conference.


(Dr. G.S. Patel) 05/03/13

Welcome Message by Patron



I feel great honor and pleased to extend a warm invitation to you to participate in the National Conference on Human Papillomavirus and control of cervical cancer: current scenario will be held from 16-17 March, 2013 at College of Life Sciences, Cancer Hospital & Research Institute Campus, Gwalior.

This is an exciting time for those in the field of Medical Sciences and related streams. The National Conference will be a great opportunity for life sciences and medical students, researchers and professionals from this nation to share the most up-to-date information regarding the cervical cancer.

I take this opportunity to congratulate profusely the Director, Principal, Doctors, Faculty and staff for their excellent committed and vigorous efforts in organizing this event.

I have great pleasure to extend hearty congratulations whole-heartedly to our beloved students and wish them all success in all their endeavors in carving out bright career and life profiles.

I wish that conference will be of great academic interest to participants and everyone is likely to be benefitted from the discussions and can utilize the knowledge so gained.

I extend my warm welcome to all the delegates and wish all success of this conference. We look forward to see you in this historical city Gwalior for a stimulating and enjoyable conference.

Dr. B. R. Shrivastav

Patron

From the desk of Convener & Organizing Secretary



Dr. Archana Shrivastav
Convener



Vivek Shrivastav
Organizing Secretary

It is a matter of great pleasure to welcome a galaxy of researchers, clinicians, teachers and students in the historical and musical city of Gwalior for the National Conference on Human Papillomavirus and Control of cervical cancer: Current scenario. This grand dream has become a reality by the Grace of Almighty and the ground work was done by my dedicated faculty and staff members.

This two days conference boosts up the students not only in curricular aspects but also in research activity. It provides the students an excellent opportunity for exchange and dissemination of new ideas and experiences with other students and researchers.

We duly acknowledge the co-operation and sincere efforts of all members of our team to set up the entire show. We are confident that your two days visit will open up new ideas and knowledge for serving the humanity in quality.

With immense pleasure, We once again welcome you all and hope you have an educational and memorable stay in Gwalior.

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College of Life Sciences – A Brief Profile

The emerging need of professional personalities in the field of Life Sciences encouraged Smt. Kamla Sahai and Shri Shitla Sahai ji to establish College of Life Sciences as a prestigious educational college. Their dream which was visualized in the year 1990 come true when CLS was established under the aegis of Jan Vikas Nyas. We are proud to say that it is the first Educational Institution in Life Sciences in Gwalior City to start with the Post-graduation courses in Applied Microbiology and Applied Biochemistry. College has permanent affiliation to the Jiwaji University, Gwalior.

The Jan Vikas Nyas was founded by Late Smt. Kamla Sahai and Shri. Shitla Sahai ji in the memory of their beloved only son Late Shri Rajiv Sahai, who lost his valuable life because of cancer. They pledged to give help to the people of this region and support in all aspects related to human welfare in general and cancer control in particular, by way of generating cancer awareness, its early detection and treatment at Cancer Hospital & Research Institute, Gwalior. The Jan Vikas Nyas through its Governing Body governs the administration of the CLS within the framework of University Grants Commission, New Delhi and Jiwaji University, Gwalior,

Since the CLS came into existence in 1990 with an ardent intent to impart quality education in the field of Life Sciences and to equip students with knowledge and skills that would enable themselves to make meaningful contribution to self and the society. College offers M. Sc., and Ph, D. programs leading to Masters' and Doctoral degree in Microbiology, Biochemistry and Biotechnology. The College has also started undergraduate courses (B.Sc.) in Industrial Microbiology, Biochemistry and Biotechnology in the year 2005. Taking advantage of Cancer Hospital and Research Institute as sister Institute, College has also opened door to the students who wish to make their carrier in Paramedical subjects. These courses include Medical Laboratory Technology, X-Ray Radiography Technician, Ultrasound and CT-MRI. The College is successful in its aim of making good students in all respects that is evident from their placement in India and abroad. Many students of the college have also qualified in competitive examinations. The credit goes obviously to the teacher, expert professionals, working with us and the unique facilities being provided by the college. The faculty members of CLS are specialized scientists engaged in various areas of research in various fields of Life Sciences. The CLS thus has a good spectrum of research expertise encompassing disciplines of cellular, molecular and structural biology.

Many students have qualified themselves in examination viz UGC /CSIR-N ET, GATE, ICMR etc. Students are assessed and evaluated throughout the semesters through tests, Seminars, assignments mid semester and end semester examinations regularly etc. Besides, to get the students abreast with the recent advancement in the field of life science, Seminars / Symposium are organized by the college, in which students get opportunity to interact with the experts in the field.

Introduction to Cancer Hospital and Research Institute

Cancer Hospital and Research Institute (CHRI), Gwalior has been established to alleviate the sufferings of the cancer victims, catering even to the needs of the poor, needy and deprived sections of the society where each and every cancer patient will receive state-of-the-art treatment.

CHRI has a tragic background in its foundation. Our Founder Trustee, Late Sh. Shitla Sahai ji and his wife lost their only son Rajiv, due to bone sarcoma in March 1971. Hardly any facilities were available then in Gwalior for the treatment of Cancer. Undaunted by the grief, this family vowed to start a Cancer Hospital in Gwalior. With this in view, a charitable trust (Jan Vikas Nyas) was founded in May 1971. Surmounting difficulties and with untiring efforts of the bereaved family, Cancer Hospital was started in 1977, which eventually bloomed to become a super speciality cancer centre giving ultimate care at regional level incessantly since last 35 years.

Govt. of M. P. had been generous enough to allot 266 acres of pollution free hill top area for this noble cause. The institute was recognised in 1980 as one of the ten Regional Cancer Centres for research and treatment by the Govt. of India.

The institution has been able to achieve significant landmarks since the day of establishment, the aim being to keep ourselves updated and ahead of times. Along with complete comprehensive cancer care, patients are supported very well emotionally and morally by the sensitive staff.

The hospital is also engaged in the field of medical research and drug trials appropriate to local conditions, managed through a Scientific Research advisory and ethical Committee. The hospital has set new landmarks in community health services by providing preventive health care.

The institution has well equipped departments of surgical oncology, medical oncology, gynae oncology and radiation oncology besides pathology, blood bank, radio diagnosis, anaesthesia, microbiology, biochemistry, nuclear medicine and community medicine under one roof, managed by a team of competent doctors. The hospital has also been facilitated by telemedicine services. From the very inception the hospital has on its panel eminent oncologists and other professionals from within the country and abroad.

About PG College of Nursing

Our institution started School of Nursing in the year 1985 with annual intake of 25 seats for three years course of General Nursing and Midwifery course which was approved by INC, New Delhi and M. P. Nursing Council, Bhopal. This was the first Nursing school in Madhya Pradesh state which was representing to North India. At present our GNM seats was enhanced 60 seats of annual intake and running successfully.

For improvised nursing care facilities in scientific manner, then B. Sc. Nursing four years degree course was started in the year 1992 which was permanently affiliated to Jiwaji University, Gwalior; Indian Nursing Council, Delhi MNC, Bhopal and Higher education of Madhya Pradesh state. During that period it was stated with intake of 25 students.

Now Post graduate College of nursing is the first College in Madhya Pradesh where annual intake of B. Sc. Nursing course for 100 seats. Master of Nursing sciences courses as first started by this college in the year 2002 which was permanently affiliated to Jiwaji University, Gwalior and approved by Indian Nursing Council, New Delhi with annual intake of 10 students only which was first nursing college not only in Gwalior but also in Madhya Pradesh state of North India. At present seats have increased from ten to 25 annual intake of seats for M. Sc. Nursing two years Post Graduate course.

We have achieved the above said progress by the efforts of Late Sh. Shitla Sahaiji who was the Founder Trustee of this institution.

Till date 789 B. Sc. Nursing, 179 M. Sc. Nursing qualified graduates and post graduates were passed out successfully from our institution. Our qualified graduates and post graduate students are working in all most all parts of the country in renowned hospitals like Delhi, Mumbai and other parts of the country and abroad like England, Ireland, USA, Canada, Australia, New Zealand and Gulf countries.

Our students always participated in sports activities and awarded many awards at University level, District level and state level. Our institute is also having NSS unit with 50 volunteers who has participated in different social welfare activities at college, District and state level.

Our college regularly conducts seminars, symposium, workshops on different essential topics on nursing in which state level and National level participants take part and every year students are enrolled in SNA which is the part of our mother organization that is Trained Nurses Association of India, New Delhi.

National Conference
On
Human papillomavirus and Control of Cervical Cancer- Current Scenario
16-17 March, 2013
Sponsored by MPCST & UGC, Bhopal

Scientific program

Saturday, March 16, 2013

9:00 am	Registration
10:00 am - 11:00 am	Inaugural function
11 am - 12:00 noon	Rajiv Sahai Oration Topic: Human papillomavirus infection and its clinical relevance and control Speaker : Dr. B.C. Das Director ACBR Ambedakar Centre of Biomedical Research Delhi
12:00 noon - 12:30pm	High tea
Pre-lunch Session 12:30 pm - 1:30 pm	Key note address
12:30 pm - 1:00 pm	Topic: HPV infection □ changes in cervical epithelium and pathogenesis Speaker : Dr. Suresh Bhambhani, ICPO Noida Chairpersons : Dr. Harshwardhan Kulshreshtha, Gwalior Dr. Bharat Jain, GRMC Gwalior
1:00 pm - 1:30 pm	Topic: Human papillomavirus (HPV), cervical cancer and HPV vaccine Speaker : Dr. Mausami Bhardwaj, ICPO Noida Chairperson : Dr. Jyoti Bindal, GRMC Gwalior Dr. Roza Olyai, GRMC Gwalior
1:30pm - 2:30pm.	Lunch
Post -lunch Session 2:30 pm - 3:30 pm	Public Forum HPV vaccine & cervical cancer
3:30 pm - 4:30 pm	Free paper session Chairpersons : Dr. G.B.K.S Prasad, JU Gwalior Dr. Vinod Singh, BU Bhopal Dr. A.M. Jana, DRDE Gwalior
4:30 pm	Tea break

***Poster Exhibition will be displayed at 10:00 am onwards.**

National Conference
On
Human papillomavirus and Control of Cervical cancer- Current Scenario
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Scientific program

Sunday, March 17, 2013

09:30 am – 10:30 am

High Tea

Pre-lunch Session

10:30 am – 12:00 noon

Key note address

10:30 am – 11:00 am

Topic: Various methods of molecular diagnosis of HPV

Speaker : **Dr. M.M. Parida, DRDE Gwalior**

Chairpersons : Dr. P. K. Tiwari, JU Gwalior

Dr. Y.K. Jaiswal, JU Gwalior

11:00 am – 11:30 am

Topic: Computational strategies for cervical cancer treatment

Speaker : **Dr. Rahul Shrivastava, MANIT Bhopal**

Chairpersons : Dr. Pawan Das, DRDE Gwalior

Dr. Sameer Bhagyawant, JU Gwalior

11:30 am – 12:00 noon

Topic: Natural and Synthetic compounds for cervical cancer treatment in india

Speaker : **Dr. Shashi Alok, BU Jhansi**

Chairpersons : Dr. Suman Jain, JU Gwalior

Dr. Jot Sharma, Birla Institute Gwalior

12:00 noon – 12:30pm

Debate

Topic: Do HPV vaccine needed in prevention of cervical cancer

Moderators : Dr. G. Tejowati, Bostan Institue Gwalior

Dr. Nalini Shrivastava, JU Gwalior

12:30 pm – 1:30 pm

Quiz

1:30 pm – 2:30pm

Lunch

2:30 pm – 3:30 pm

Valedictory session

What Cancer Cannot Do

Submitted by: Constancelynn

Author: Unknown

Cancer is so limited...
It cannot cripple love.
It cannot shatter hope.
It cannot corrode faith.
It cannot eat away peace.
It cannot destroy confidence.
It cannot kill friendship.
It cannot shut out memories.
It cannot silence courage.
It cannot reduce eternal life.
It cannot quench the Spirit.

INVITORY LECTURE

HUMAN PAPILLOMAVIRUS INFECTION - CHANGES IN CERVICAL EPITHELIUM AND PATHOGENESIS

Dr SURESH BHAMBHANI

MD(Path) MIAC

CHIEF DIVISION OF CYTOPATHOLOGY

Institute of cytology and preventive oncology

NOIDA

There is excellent evidence that invasive carcinoma of the uterine cervix develops from abnormal cancerous surface epithelium i.e. carcinoma-in-situ. However cancer may develop from lesser degree of histologic abnormalities or dysplasia. Etiopathogenesis of precancerous and cancerous lesions of cervix has received a great deal of attention past several decades. Large numbers of microbial agents were linked with its possible etiology. In early days even trichomonas was once considered as causative agent for carcinoma cervix. Later on numerous bacterial and viral agents were studied for their causative role. In 1970s HSV-II was thought to be implicated in etiogenesis of cancer. Further prospective studies measuring exposure to post HSV-II infection, however indicated no association for HSV-II with the process of cervical carcinogenesis. The most promising role of inducing cancer cervix now appearing, is that of HPV. It has been found in recent studies that almost all if not all high grades CIN lesions and invasive cancers contain identifiable HPV DNA.

HUMAN PAPILLOMAVIRUS (HPV), CERVICAL CANCER AND HPV VACCINE

Mausumi Bharadwaj¹, Showket Hussain¹, Anoop Kumar^{1,2} and Bhudev C Das²

¹Division of Molecular Genetics & Biochemistry, Institute of Cytology & Preventive Oncology (ICMR), I-7, Sector 39, Noida.

²Ambedkar Center for Biomedical Research, Delhi University – North Campus, Delhi University

Cervical cancer is the second most common diagnosed cancer in women after breast cancer worldwide, but in India, it is the most common gynecological cancer. It involves a series of events, in which normal cervical cells gradually undergo changes leading to the development of precancerous lesions spanning 10–15 years. Several risk factors are associated with the development of cervical cancer including infection with human papillomavirus (HPV), especially persistent infection with high risk HPV mainly with HPV-16 and HPV-18, host cellular and genetic factors, immunodeficiency of host, HPV variants, viral load and viral integration etc.

The oncogenic potential of HPV is attributed to its E6 and E7 genes. The products of these two genes stimulate cell proliferation by activating the cell-cycle specific proteins and interfere with the functions of cellular growth regulatory proteins, p53 and pRb. Various robust molecular approaches are being used to study gene expression profile, SNPs, promoter methylation, microRNAs etc. in order to develop cancer biomarkers.

Currently, two successful prophylactic HPV vaccines- quadrivalent “Gardasil” (HPV16/18/6/11) developed by Merck and bivalent “Cervarix” (HPV16/18) by GlaxoSmithKline (GSK) are available. Both the vaccines showed lot of promise, but these vaccines may not be suitable for the low resource settings including India. Vaccine for the resource limited countries should have low cost of production, to have a longer shelf-life, single dose delivery, long lasting immunity, and having both prophylactic and therapeutic value, should be stable at room temperature and it could incorporate other oncogenic HPVs. A Change in nucleotide (variation) may change amino acid located in epitopes critical for the immune response against the pathogen for the particular geographic area. Therefore, the vaccine against the variation of the same geographical location may increase the immunogenic efficacy of HPV.

Therefore our group worked on the molecular variant analysis of the full length L1 of HPV 16 from cervical cancer tissue biopsies. Identified a total of 16 major variations comprises of seven silent variations, seven missense variations and two frameshift variations e.g. one insertion and one deletion. In silico analysis of these variations showed that among seven missense variations, four major variations are there which may play important role in the immunogenicity by increasing/decreasing the binding affinity of immunogenic peptide (epitope). Out of these 4 major variations, two of them V3 and V8 may cause the reduction of immunogenicity as they are present in close vicinity of epitope and ultimately cause disappearance of predicted binder peptide for MHC alleles. Therefore, these variations may be important for the carcinogenic potential of the HPV 16 and development of the vaccines which we are in the process of validation in experimental animal model.

PERSPECTIVES OF GENE AMPLIFICATION TECHNOLOGIES FOR RAPID AND RELIABLE CLINICAL DIAGNOSIS OF EMERGING ARBOVIRUSES OF BIOMEDICAL IMPORTANCE

M. M. Parida

Division of virology

Defence R & D Establishment (DRDE),

DRDO, Min of Defence, Gwalior, M. P. – 474002

The rapid diagnosis of virus diseases has assumed greater significance owing to the direct benefit of patient management in absence of suitable therapeutic and prophylactic measures. The conventional identification methods require time-consuming culturing, and/ or detection of antibodies, which are not very sensitive and specific. The recent advances in molecular biology techniques in the field of genomics and proteomics greatly facilitate the rapid identification with more accuracy. Nucleic acid amplification is one of the most valuable tools in virtually all life science fields including clinical diagnosis of infectious diseases. The development and application of various gene amplification assays including *PCR*, *Real-time PCR* and *LAMP* are increasingly being used in routine practices for early reliable diagnosis of the emerging viruses viz; *Dengue*, *Japanese Encephalitis*, *Chikungunya*, *West Nile*, *SARS*, *Swine Flu* etc. in recent past. These techniques are capable of detection and differentiation as well as quantifying viral load with higher sensitivity, rapidity, specificity and are suitable for high throughput screening of samples. The recent advances in the development of fluorophores, nucleotide labeling chemistries, and the novel applications of oligoprobe hybridization have provided real-time PCR technologies with a broad enough base to ensure their acceptance. Recently, instrumentation has come up that is capable of incredibly short cycling times combined with the ability to detect and differentiate multiple amplicons. New instruments are also flexible enough to allow the use of any of the chemistries making real-time nucleic acid amplification an increasingly attractive and viable proposition for the routine diagnostic laboratory.

COMPUTATIONAL STRATEGIES FOR CERVICAL CANCER TREATMENT

Rahul Shrivastava

Department of Chemical Engineering and Biotechnology

Maulana Azad National Institute of Technology Bhopal- 462051

Cervical cancer is the third most common female cancer in the world. It is estimated that it affect approximately 500 000 women each year, of whom 80% live in developing countries. Virtually all cervical cancer cases result from genital infection with human papillomavirus (HPV). Papillomaviruses are ubiquitous and have been detected in a wide variety of animals as well as in humans and are specific for their respective hosts. More than 200 types of HPV have been recognized on the basis of DNA sequence data and showing genomic differences. The most common high-risk HPV are HPV-16 and HPV-18, and approximately 70% of cervical cancers (CC) are due to infection by these genotypes. Papillomaviruses are small nonenveloped viruses with 55 nm diameter icosahedral capsids that contain double-stranded DNA genomes of approximately 6800 to 8000 base pairs in length and codes for eight genes - E6, E7, E1, E2, E4, E5, L1 and L2. The first six are "early" viral genes which code proteins produced during the early phase of infection in the basal cell layer. They result in enhanced proliferation of the infected cells and their lateral expansion .There are various types of molecular diagnostics methods like signal amplification or nucleic acid amplification assay which is used in the molecular diagnostic method for detection of cervical cancer. Computational biology or Bioinformatics approach are now a day the most recent approach which is widely used in the diagnosis and treatment of diseases. Various strategies like biomarker design with the help of proteomic approach for early diagnosis of disease or identifying the changes in the gene expression profile between diseased and undiseased cells move towards a step in the cure of disease. Homology modelling and protein modelling are also played very important role in the in the drug designing process.

NATURAL AND SYNTHETIC COMPOUNDS FOR CERVICAL CANCER TREATMENT IN INDIA

Shashi Alok

Assistant Professor, Department of Pharmacognosy, Institute of Pharmacy,

BundelkhaUniversity, Jhansi (U.P.), India &

Editor, International Journal of Pharmaceutical Sciences and Research (IJPSR)

Email: shashialok83@gmail.com

Cervical cancer has a major impact on women's lives worldwide and one in every five women suffering from cervical cancer belongs to India. New and effective approaches now make it possible to reduce the burden of cervical cancer in developing countries, where the disease takes its heaviest toll. It is a preventable disease results from abnormal cell changes on the cervix (the opening of the womb. If it is not detected and treated early, cervical cancer is nearly always fatal. The disease, which affects the poorest and most vulnerable women, sends a ripple effect through families and communities that rely heavily on women's roles as providers and caregivers. There are several synthetic (Cervarix and Gardasil) and herbal (Phenoxodiol and Carvacrol) treatment options are available in the market to treat cervical cancer.



ORAL PRESENTATION

OP-1 A novel approach for the rapid detection of human papillomavirus using nano-probe

R. M. Tripathia,b, Archana Shrivastava*, Karn Pratap Singhc, B. R. Shrivastavd,e

aDepartment of Microbiology, College of Life Sciences, Gwalior - 474 009 (M.P.), India.

bSchool of Science in Biotechnology, Jiwaji University, Gwalior - 474 011 (M.P.), India.

cAnimal Biotechnology Center, National Dairy Research Institute, Karnal- 132001 (Haryana), India

dDepartment of Surgery, G. R. Medical College, Gwalior – 474009 (M.P.), India

eDepartment of Surgical Oncology, Cancer Hospital & Research Institute, Gwalior 474 009 (M.P.), India.

We have demonstrated a fast, cheap and simple screening methodology for the detection of human papillomavirus (HPV). We have established a green approach for synthesis of gold nanoparticles (AuNPs) using *Ficus benghalensis* leaf extract. The synthesized nanoparticles were characterized by UV-Vis spectroscopy, Dynamic light scattering (DLS), transmission electron microscopy (TEM), X-ray diffraction (XRD) and Fourier transform infra-red (FTIR) spectroscopy. The synthesized gold nanoparticles were functionalized by bi-functional ligands in which a moiety is used for anchorage to the particles while the other is directed to the outer-surface for specific interaction with biomolecules. Thiol-modified oligonucleotides (DNA- Primer) have been used to functionalize the AuNPs for specific detection of nucleic acid. The fabricated nanoprobe (functionalized AuNPs) was interacting with isolated DNA of HPV. The hybridization of nanoprobe with target DNA resulted in the formation of polymeric network, which brought the nanoparticles close enough to react with target DNA and aggregation of nanoparticles takes place. Due to this aggregation colorimetric change occurs and by this observation.

OP-2 *In silico* vaccine design against the target L1 binding protein of Human Papillomavirus, an etiological agent of cervical cancer, using bioinformatics tools **Kaushik Shuchi¹, Shrivastav Vivek Kumar², Shrivastav Archana², Jana Asha Mukul¹**

¹Department of Biotechnology, College of Life Sciences, Cancer Hospital & Research Institute Campus, Gwalior-474009, India.

²Department of Microbiology, College of Life Sciences, Cancer Hospital & Research Institute Campus, Gwalior-474009, India

Human Papilloma Virus (HPV) is the smallest virus in the world. HPV is a non-enveloped double-stranded circular DNA virus, which can widely infect human skin and reproductive tract and respiratory epithelium. HPV also has a close relationship with benign and malignant tumors. There is no universal HPV treatment. Although there is a vaccine called Gardasil that can prevent some diseases caused by HPV, it is not recommended for everyone and does not eliminate the chance of

getting other types of HPV. Thus, the aim of the present study is to design a subunit vaccine against HPV using bioinformatics approaches. In order to achieve our objective, we have used B-cell and T-cell epitope prediction methods. The possible vaccine target was proposed by using the conserved sequence among the chosen L1 binding protein from twenty different sequences. Structure prediction of this sequence by PSIPRED revealed that one helix is present in the sequence. The use of immunoinformatics has greatly revolutionized the field of vaccine research, discovery and development. It demands the proper computational investigations of every possible antigenic candidate. The present study finds that L141 protein of HPV can also be an effective candidate for the development of preventive measures against the drastic diseases caused by the virus by blocking its resistance efficiency. In fact *in silico* approach for vaccine target prediction are definitely reducing manpower, time and cost in relation to searching a lead antigenic molecule against the L1 protein.

Keywords: HPV, tumors, immunoinformatics, vaccine

OP-3 Lipid Peroxidation and Antioxidant Enzyme Status in Patients with Cervical Carcinoma

Jain Ruby, Kshatri Shailendra Singh, Pathak Manoj

P.G. Dept. of Life Science, ITM University, Gwalior
manojitm47@google.com, rubyscientist64@gmail.com

Cervical carcinoma is one of the major causes of oncological mortality in India. Although Cancer of the cervix (Cacx) is mediated by human Papilloma Virus (HPV) infection but Reactive Oxygen species (ROS) also play an important role in the initiation and progression of disease. The present investigation was undertaken to examine the relation between lipid peroxidation and enzymatic antioxidant status in Cacx were patients. 45 women aged between 30-65 years with Cacx were selected as patient group and an equal number of healthy women of the same age group was taken as the control group. The parameters of lipid peroxidation (malonylaldehy- MDA) and enzymatic antioxidant system (super dismutase- SOD, catalase –CAT, glutathione peroxidase-Gpx) were determined spectrophotometrically. A significantly higher level of serum lipid peroxide in the form of MDA (p 0.05) was observed whereas significantly lowered activity (p 0.05) of SOD, GPx, and CAT in Cacx was observed when compared to normal healthy subject. The present finding shows that the oxidative stress is included extensively among Cacx patient. It could be concluded that oxidative stress may be associated with the pathophysiology of cervical carcinoma.

OP-4 L-Asparaginase- An antineoplastic agent

Shrivastava Abhinav¹, Khan Abdul Arif^{1,2}, Shrivastav Archana¹, Jain K Sudhir³ and Singhal K Pradeep⁴

¹College of Life Sciences, Cancer Hospital & Research Institute Campus, Gwalior (MP), ²Dept. of Pharmaceutics, King Saud University, Riyadh, KSA, ³Dept. of Microbiology, Vikram University, Ujjain (MP), ⁴Dept. of Bioscience, RD University, Jabalpur (MP)

L-asparaginase is main drug used for treatment of Acute Lymphoblastic Leukemia (ALL) and other related blood cancers. Generally, this enzyme is obtained from bacterial sources which cause many side effects and allergenic reactions in patients. Currently, L-asparaginase from *E. coli* and *Erwinia chrysanthemi* are commonly used but modification like PEG-asparaginase is also popular commercially. L-asparaginase packed in erythrocytes and recombinant asparaginase is also used for therapeutic applications. Other eukaryotic sources of L-asparaginase are also subject of research. This text deals with management of ALL by bacterial asparaginase, their side effects and further research going in the direction of L-asparaginase development as potential antineoplastic agent.

Keywords: ALL, therapy, allergy

OP-5 Molecular Alteration by HPV in Oral Cancer

Sharma Nishant^{1,2}, Srivastav BR¹ and Shrivatav Archana²

¹Cancer Hospital and Research Institute, Gwalior (India), ² College of Life Sciences Gwalior (India), nishant7373@yahoo.co.in

There is currently sufficient evidence to conclude that human papillomavirus (HPV) plays a role in the pathogenesis of a different division of head and neck squamous cell carcinoma especially cancers of the tonsils, followed by those of the base of tongue. Human papilloma virus may contribute to the development of about 25% of oral cancer cases. In addition to tobacco and alcohol, HPV plays an important role in the development of oral cancer. High-risk HPV-16 is the predominant type which commonly affects the younger age-groups, with males appearing to have a predilection for infection with this strain. In this review we focused exclusively on oral cancer, for which the molecular evidence of a causal role for HPV and strength guide future cancer-prevention programs involving vaccination to prevent oral HPV infection or screening to detect it. HPV's E₆ and E₇ Proteins inactivate TP53 protein, Rb protein respectively and mediate its degradation, effectively silencing the action of the TP53 tumor suppressor gene. Tobacco and alcohol carcinogen cause mutation that inactivate the P16 gene, which lies upstream of the Rb tumor suppressor gene. The silencing of P16 gene inactivates Rb. This leads to chromosomal instability, breakage and loss that contribute to tumor progression.

Keywords: Oral Cancer, HPV, tumor suppressor gene

OP-6 Role of Quality Assurance in Vaccine Development and Production

Kumar Prabhat

Immunology Lab, National Research Centre on Equines (NRCE), Hisar- 125 001, India

Vaccination is one of the most important methods of prevention of diseases in animal and human beings. Vaccines may be live or killed products of microorganisms. Some live vaccines are prepared from low virulent, mild field isolates of a disease causing agents that have been found to be safe and effective when administered by an unnatural route or under other conditions where exposure to the microorganism will immunize rather than cause disease conditions. Other live vaccines are prepared from isolates of disease causing agents that have been modified by passage through culture media, cell culture, avian embryos or through laboratory animals. The development of recombinant DNA procedures has provided unique opportunities for vaccine production. Modified live vaccines may be specifically produced by deletion of virulence related genes from a microorganism. Other are produced by the insertion of genes that code for specific immunizing antigens from a disease causing organism into a non-virulent vector organism. Nucleic acid mediated vaccines containing plasmid DNA are being developed. The DNA is usually in plasmid form and codes for immunizing antigens from disease causing microorganisms. DNA vaccines are easy to produce, inexpensive and immunogenic for several antigens. Killed vaccines may contain inactivated microorganisms, inactivated toxins or subunits (antigenic parts of microorganisms). The consistent production of pure, safe, potent and efficacious vaccines requires quality assurance procedures like validation of procedures to ensure the uniformity, consistency production processes and protection from contamination through all stages of the production. Purity, safety, potency and efficacy must be ensured by consistency in vaccine production process. Batch to batch uniformity must be built at each stage. Control procedures selected should be those that best fit the conditions under which vaccines are being produced and comply with good manufacturing practice (cGMP). The optimal quality assurance system should address both production procedures and final product testing in proper balance. Final product testing is used as a check to verify that the controls on the production procedures have remained intact that the released product meets the specification previously agreed with the licensing authority.

OP-7 *In silico* homology modeling and structure prediction of capsid protein L1 of human papilloma virus Type 35

Kumar Santosh¹, Parihar Singh Surendra², Seniya Chandrabhan³, Verma O.P³.

¹Jacob School of Biotechnology & Bioengineering, SHIATS, Allahabad, UP, India, ²School of Life Sciences, ITM University, Gwalior, M.P., India, ³Madhav Institute of Technology & Science, Gwalior, M.P., India
santosh_mtech@rediffmail.com

Human Papilloma Virus affects human skin and the moist membranes that line the body, such as the throat, mouth, feet, fingers, nails, anus and cervix from the papillomavirus family. There are over 100 types of which 40 can affect the genital area they may eventually develop into Cervical intraepithelial neoplasia (CIN) - cervical cancer, Penile intraepithelial neoplasia (PIN) - penile cancer. Half of all tumors of the penis, including malignant ones, are linked to the most ordinary forms of sexually transmitted HPVs, Anal intraepithelial neoplasia (AIN) - [anal cancer](#). Over 90 HPV subtypes have been identified based on DNA sequence relationships. Strong epidemiologic and biochemical evidence supports association of infection by certain high-risk HPV subtypes with subsequent development of human cervical cancer. Physiochemical characterization of 2R5J_M **protein** was done to interpret properties like pI, EC, AI, GRAVY and instability index. Homology modeling was performed to generate good quality models. The assessment of generated three dimensional structure against structure verification tools PROCHECK and WHATIF showed that model generated by Swiss Model was more acceptable to that by GENO 3D. The predicted model can be used in structure based drug designing and vaccine development.

PP-8 Advances in human papilloma virus vaccines

Tomar PS Akhilesh

Ruxmaniben Deepchand Gardi Medical College, Ujjain

Cervical cancer is the second most common cancer among women and the third leading cause of cancer death. Approximately 500,000 women worldwide develop new cases of cervical cancer annually, with 80% of these new cases occurring in developing countries. Human papilloma virus (HPV) infection is the main factor associated with the development of cervical cancer. The currently available HPV vaccines, Gardasil and Cervarix, can prevent infection by certain HPV types, but not all. At present, research efforts are being devoted to developing broad spectrum preventative vaccines, as well as therapeutic vaccines. To confer additional therapeutic activities, chimeric vaccines have been developed. Multivalent vaccine technologies employ strategies for addressing a broader spectrum of HPV types or for combining HPV with other pathogens. Edible vaccines are also disclosed. For needleless immunization, jet gun, gene gun and micro needles have been developed.

Biodegradable and mucoadhesive polymer-based vaccine formulations have been developed to deliver vaccines through the mucosa and enhance immunogenicity. Various viral vectors of recombinant HPV DNA vaccine are disclosed.

PP-9 Human papillomavirus: the oncogenic potential

Sharma Ruchi

Ideas dental College, Gwalior

Human papillomavirus is one of the most common virus groups in the world today affecting the skin and mucosal areas of the body. HPV transmission can be quite simple with just skin to skin contact transferring the virus. Links between human papillomaviruses (HPVs) and cervical cancer were first suspected almost 30 years ago. Two types of genital tract HPV in particular, HPV 16 and HPV 18, are known to cause the vast majority of cervical cancers, and new studies show that one of them, HPV16, is also linked to oral cancer as well. HPV oncogenes E6 and E7 that are expressed in these cells are involved in their transformation and immortalization, and are required for the progression towards malignancy. Understanding the mechanism of viral oncogenesis combined with early detection can prevent progression of premalignant lesion to malignant.

OP-10 Wheatgrass as a Scope of Herbal Therapy in Cervical Cancer

Sharma Sachin¹, Shrivastav B.R³, Shrivastav Archana², Sharma Arvind¹, Sharma Neha¹, Singh pragati¹

¹College of Life Sciences, ²Head of the Department of Microbiology, College of Life Sciences, ³Director Cancer Hospital and Research Institute & College of life science, Gwalior (M.P.)

Oxidative stress is thought to be involved in the development of many diseases or may exacerbate their symptoms including cancer in human. Free radicals can cause toxicity and damage many components of cells including proteins, DNA and lipids by the production of peroxides. There is a significant increase in Lipid peroxidation (MDA levels), NO levels and Cu content and significant decrease in activity of SOD activity, GSH levels Vitamin C, A, E and Zinc levels has been noticed. Cu/Zn ratio was also altered in cervical cancer patients. It has been seen that antioxidant supplementation (Beta carotene, vitamin C and E) during chemotherapy in cervical cancer patients is able to reduce oxidative stress, hematological toxicity and improve quality of life in cervical cancer patients. Wheatgrass is known as one of the richest natural source of chlorophyll, which act as an anticancer agent. Wheatgrass contains vitamin C, E, A, K, B1, B2, B3, B5, B6, and B12, Beta carotene, antioxidant enzymes such as SOD, Cytochrome oxidase, other helpful enzymes including Protease, Lypase and Transhydrogenase, wheatgrass contains almost all the amino acids and some minerals and trace elements such as iron, copper, iodine, selenium zinc, nickel, sodium, potassium etc, A glycoprotein P4D1 is found in wheatgrass which can stimulate the renewable of DNA and RNA, these all components of wheatgrass together provides a good therapeutic potential to wheatgrass against oxidative stress in cervical cancer.

Keywords- Cervical cancer, Oxidative stress, Lipid peroxidation, Wheatgrass, Antioxidant, SOD, Catalase.

OP-11 Strategies for Assessing the Antioxidant Potential of different varieties of Apple (*Pyrus malus* L.) Kashmir (J&K) region in lieu of determination of Potent Anticancer agents

Mathur Abhishek¹ and Anand Nidhi²

¹Institute of Transgene Life Sciences (ITLS), Dehradun (U.K), India, ²National Centre of Fungal Taxonomy (NCFT), New Delhi, India.
abhishekmthr@gmail.com

Kashmir (J&K), a beautiful paradise in India is considered the original home of apples (*Pyrus malus* L). Phenolic compounds are believed to impart resistance to diseases in plants and Polyphenol oxidase (Catecholase and Cresolase) enzyme has been reported to be responsible for in vivo synthesis and accumulation of these compounds. The present study is a copulation of two small studies. The first study was done in order to investigate and screen the better varieties of apples of Kashmir region in view of antioxidant activity (via estimation of polyphenols oxidase activities and polyphenolic content) and the second study emphasized the role of pectin, a natural polysaccharide as a natural antioxidant in screening the different varieties of Kashmir. Since a fact is already established that good antioxidants are potent anticancer agents. Thus the present study was thus propagated to establish the relationship between polyphenolic compounds, antioxidant activity and anticancer activity. The results were found to be very remarkable. During the first study, the results showed that increase in Polyphenol oxidase (PPO) activity and total phenolic content in apple fruit samples of Ambri and Red Delicious varieties were prominent in accordance with antioxidant activity to that of Kessi and American Trel which have reduced Polyphenol oxidase activity, total phenolic content and antioxidant activity. The results of second study showed that the pectin content of the Red Delicious variety is potent antioxidant agent in comparison to American and Maharj-Ji variety. The studies thus reveal the two different strategies for assessing the antioxidant activities and simultaneously can act as parameters for assessing and screening the fruits and vegetables. The present investigations are the unique work done ever to investigate and screen the different varieties of Kashmir (J&K) on the basis of antioxidant activity.

Keywords: *Pyrus malus*, antioxidant, anticancer, polyphenol oxidase, polyphenolic content, pectin content.

POSTER PRESENTATION

PP-1 Human Papillomavirus and Telomerase Activation

Narwaria Malti¹, Shrivastav Archana², Shrivastav BR³

¹College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India, ²Professor and Head, Deptt. Of Microbiology, College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India, ³Director, Cancer Hospital and Research Institute, Gwalior, Madhya Pradesh, India

narwarimalti@gmail.com

Cervical cancer (CC) is the second leading cause of cancer deaths in women, with more than 80% of these occurring in developing countries that have limited access to screening programs. An estimated 1, 82, 027 new cases and 77,096 deaths due to cervical cancer occurred in India in 2010, contributing to 29per cent and 30per cent of the global burden of cervical cancer incidence and mortality. It is estimated that 12,170 women will develop cervical cancer and about 4,220 women will die from cervical cancer in the United States during 2012. Remarkably, it always takes about ten years to arise from precancerous lesion to invasive cervical cancer. For this reason, the effective screening of precursor lesion is of great importance, which makes cervical cancer preventable and curable.

Telomerase activation plays a critical role in cellular immortalization and might be important for malignant progression. The viral oncogenes E6 and E7 are the principal transforming genes of high-risk HPVs (Human papilloma viruses) and are important in HPV-associated immortalization and neoplastic transformation. HPV infection plays an etiological role in the development of cervical dysplasia and cancer. Amplification of human telomerase gene (hTERT) and over expression of telomerase were found to be associated with cervical tumorigenesis. Telomerase activation is mediated in part by E6-induction of the hTERT promoter. E6 induces the hTERT promoter via interactions with the cellular ubiquitin ligase, E6AP, and with the c-Myc and NFX-1 proteins, which are resident on the promoter. Transcriptional activation of hTERT by E6 oncoprotein is required for HPV-16/18- infected lung tumorigenesis. Telomerase activity was examined by the TRAP-assay and expression of the telomerase RNA (hTR) and HPV 16/18 E6/E7 oncogenes by RNA/RNA-in situ hybridization (ISH). The associated HPV-type was determined by PCR.

Telomerase activity with concomitant strong viral oncogene expression might therefore characterize a subset of lesions that are at risk for malignant progression. Therefore inhibition of hTERT transcription may be a feasible molecular targeting therapy for HPV-infected cancer.

Keywords: Telomerase, HPV, hTERT, oncoproteins.

PP-2 Cervical Cancer: Prevention and Cure

Gupta Alka¹, Gupta Raj Narayan², Sharma Sadhana

¹IPS College of Pharmacy, Gwalior, ²All India Institute of Medical Sciences (AIIMS), Patna
alka0207@gmail.com

Cancer is a disease in which there is uncontrolled multiplication and spread within the body of abnormal forms of the body's own cells. It is one of the major causes of death in the developed nations- at least one in five of the population of Europe and North America can expect to die of cancer. The cervix, a part of a woman's reproductive system, is a passage that connects the uterus to the vagina. It is the lower, narrow part of the uterus, which allows the menstrual blood to flow out into the vagina during menstruation. During pregnancy the cervix is tightly closed to keep the fetus inside the uterus until birth. Another important function of the cervix is during childbirth, when the cervix dilates or widens to allow the passage of the fetus from the uterus to the vagina. Globally, the incidence of [cervical cancer](#) is 5 lakh new cases every year, and India accounts for 27% of those. In urban areas it forms 40% of all cancers and in rural 60%. Cervical cancer is one of the most common cancers among women worldwide. Cervical cancer can be fully prevented if there is the required awareness. The tragedy, however, is that because of lack of knowledge and an it-cannot-happen-to-me attitude, is the most common kind of cancer in India today. It's tragic that [cervical cancer](#) mostly hit the young population - young women, [women](#) with growing children - whose lives seem shattered after they come to know of it. But the most important thing is to understand that it is completely preventable and, therefore, all you needed to aware that how to get yourself protected from it. There are three main approaches to treating established cancer- surgical excision, irradiation and chemotherapy. Depending upon how early the cancer is detected and type of treatment is received, the long-term survival rates are 92% for localized cervical cancer, 56% for regional cancer and 17% for metastasized cancer, after a period of 5 years. However, with early diagnosis, patient education and proper treatment, cervical cancer is a disease that can be successfully treated.

Vaccines are another most effective way of protection and HPV vaccine have been developed to protect against the HPV virus strains most responsible for causing cervical cancer. The vaccine is given in a series of 3 injections over a 6-month time span. To be effective, the vaccine must be given prior to a female having sexual intercourse.

Keywords: HPV, Cervical cancer, vaccines.

PP-3 Human Papilloma Virus (HPV) and its role in Cancer

Raja Antony Nitin¹, Annu¹, Shailendra², Hada Rahul Singh², Hada Rohit Singh²

¹Jiwaji University, Gwalior; ²S.M.S. Govt. Science College, Gwalior

12nitinraja@gmail.com

Cervical cancer in women is the second most cancer worldwide, next only to breast cancer. A major population infected is found in the developing countries like India. In India cervical cancer is the most common woman related cancer. The main causative organism for cervical cancer is Human Papilloma Virus (HPV). More than hundred strains of HPV are found out of which strains 16 and 18 are responsible for causing Cervical Cancer

Most of the cases of cervical cancer are sexually transmitted infections caused by HPV and some other factors are also responsible such as, early marriages, poor sanitation, non-awareness about the disease and unsafe sexual habits. Also if the case of cervical cancer is detected earlier in its initiation stage it can be treated easily using chemotherapy and radiotherapy. But in later stages chances to eradicate disease reduces drastically. It may prove fatal if left untreated. The cervical cancer can be examined by the cytopathological investigation of smear from a patient. A survey was conducted to find out the position of total cervical cancerous patient in Gwalior district of M.P. The data were collected and analyzed statistically. The study from all the hospitals in Gwalior including the Cancer Research Institute, Gwalior, M.P, shows that in recent years the numbers of cases suffering from cervical cancer were 35-40 % of total cancer cases.

Hence we need to explore the ways to detect the cases earlier for complete treatment of cervical carcinoma and there is a need to conduct campaigns to spread awareness against disease particularly to illiterate and also young women. The people should be properly informed that the government hospitals and clinical institutions provides free of cost treatment to infected women. In rural areas there is a need to conduct medical checkups on a regular basis to detect most of the cervical cancer cases.

So there is a need to notice the different factors and to take firm decisions in the direction of eradicating and controlling of disease with the help of doctors, social workers, youth of the country and others.

PP-4 Antioxidant activity And Immunomodulatory property of Mushroom as a Therapeutic Approach in Cervical Cancer

Sharma Arvind K.¹, Jana A.M.², Shrivastav Archana³, Bhagyawant Sameer⁴, Gupta Madhu⁵, Sharma Sachin¹, Gill Sher Singh¹

¹Department of Biotechnology College of Life Sciences, C.H.R.I Gwalior MP, ²Former Scientist D.R.D.E Gwalior MP, ³Head Of Department of Microbiology College of Life Sciences, C.H.R.I Gwalior MP, ⁴Department of Biotechnology , Jiwaji University Gwalior MP, ⁵Department of Botany College of Life Sciences C.H.R.I Gwalior MP.

Cervical Cancer is a substantial world health threat, & a second largest cause of female death in a population of various age groups and economic backgrounds. This dramatic increase in the global burden of cervical cancer has spurred research and many pharmacological studies as an attempt to limit the progression of this silent killer disease. Painful, expensive chemotherapy by dietary supplements have come forth as a novel significant approach in ailment of cervical cancer. Since ancient times mushrooms has been used a good resource of dietary supplement. Mushroom is attributed by many medicinal properties, due to presence of phytochemicals, antioxidant, anticancer, antiviral, antimicrobial, anti-diabetic, anti-inflammatory etc. bioactive compounds in fruiting bodies and cultured mycelium. Antioxidants and polysaccharides have been extensively studied biologically active compounds of mushroom for their cytotoxic as well as immunomodulating properties in various cancers. In this review we will highlight the recent findings on bioactive compounds of mushroom against cervical cancer, their therapeutic potentials and mode of action and the need for further wide investigations in cervical cancer management.

Keywords: Cervical Cancer, Mushrooms, polysaccharides, immunomodulating, antioxidant activity

PP-5- Human Papilloma Virus and Its Role in Cervical Cancer

Dixit Aishwarya

SOS M. Sc. Microbiology, Jiwaji University, Gwalior

Human papillomavirus from the Papillomavirus family establishes productive infections in the keratinocytes of the skin and mucous membranes in humans. Majorities of HPV types cause no symptoms at all and are cleared by our immune system within a period of 12 to 24 months, while some high risk types cause persistent infection and lead to cervical cancer. In 1995 the causative association between HPV and cervical cancer was recognized.

A study was conducted at the University of South Carolina in Columbia which studied college girls that included African American women and European American women. Periodic pap- test were conducted among all the women. The rate of new high risk HPV infection was similar in the two groups but the rate of persistence of the infection varied and it was observed that black women were not clearing the virus as fast compared to white women and were 40% more likely to contract cervical cancer.

The possible reason for such behavior could be genetic or lifestyle pattern. This study also indicates that HPV virus behave differently among different ethnic groups. Such studies in Indian scenario could also provide similar results. India contains genetic variability among three main ethnic groups which are Dravidians, Indo Aryans and Mongolians. There could also be a possibility that some people can clear HPV infection faster than others. This also suggests that people belonging to different races might also respond differently towards the HPV vaccine.

PP-6 Phytochemicals/Active Principle (s): Potential Anticancer agents

Mathur Abhishek^{1,2}, Mathur Deepika^{3*}

¹Institute of Transgene Life Sciences, Dehradun (U.K), India, ²Sheetal Life Sciences, Dehradun (U.K), India, ³Jawahar Lal Nehru Cancer Hospital & Research Centre, Bhopal (M.P), India
deepika11.mathur@gmail.com

An attempt has been made to review some medicinal plants used for the prevention and treatment of cancer in India. The medicinal plants contain several phytochemicals such as vitamins (A, C, E and K), carotenoids, terpenoids, flavonoids, polyphenols, alkaloids, tannins, saponins, enzymes, minerals, etc. These phytochemicals possess antioxidant activities, which prevent or can be used in the treatment of many diseases, including cancer. Herbal drugs are also known to have good immunomodulatory properties. These act by stimulating both non-specific and specific immunity.

Keywords: Medicinal plants, phytochemicals, immuno-modulatory, anticancer.

PP-7 Effective antiviral herbal therapy for HPV infection by aloe vera

Kshatri Shailendra Singh, Ruby Jain

ITM University Gwalior

Cervical dysplasia, a premalignant lesion that can progress to cervical cancer, it is caused by a sexually transmitted infection with an oncogenic strain of the human papillomavirus (HPV). HPV infection in which genital warts and common warts are appears on the skin.

The viruses are generally spread from person to person with tissues to tissues contact. Itching is not severe and may be put of as being insignificant. Medical therapies of HPV infection (for lesions or warts) are usually painful, invasion and generally traumatic through which destroying the clinical lesion by laser, cryotherapy, podophyllin and cauterization (burning off). Vaccines can put the preventing approach to reduce susceptibility in uninfected partner by stimulating immune system. Aloe vera has also been reported to retard tumour growth and stimulate the immune response to viruses and aloe vera extract has been suspected to cure cancer. The aim of our review study is to try to treat the HPV infection as confirmed cause of neoplastic transformation with herbal therapy.

PP-8 Anticancer Drugs: Difficulties in Development & Usage

Shrivastava Ashish and Garg H. K*

Department of Biotechnology, C.S.A. Govt. P. G. Nodal College Sehore - 466001 (India) *Department of Zoology and Biotechnology Sarojini Naidu Govt. Girls Post Graduate (Autonomous) College Shivaji Nagar Bhopal - 462016 (India)

Cancer is one among the scariest and deadly diseases in the world, terrifying mankind largely for the reason that it is difficult to live through it. Since, cancer results from the unrestrained proliferation of subtly modified normal human cells, it's neither easy to track it nor to curb it. One of the contemporary solutions to alleviate malignancy comprise drug therapy (chemotherapy) despite the very well-

known fact that the majority of drugs used for cancer treatment are cytotoxic that work by interfering in some ways with the operation of the cell's DNA.

Cytotoxic drugs are extremely harmful to the body unless they are specific to the cancer cells in question - a situation highly implausible to achieve because of subtle modifications that transform a healthy cell into a cancerous one. Thus, it is imperative to have new drugs that are more discriminating for cancer cells and consequently have lesser side-effects. Gone are the days when the specificity of drugs was to be worked out on animals, now it is possible to have specific drug for cancer specific cells through computer assisted drug design technology. Even then, over the last fifty years, more than 500,000 natural and synthetic chemical compounds have been tested for anticancer activity; however, barely 25 of them are commonly used these days. At present, drugs are on hand that significantly downsize the mortality rates in cases of leukaemia, testicular and ovarian cancer, ensuring longevity of life. Still, we have miles to go before truly curative drugs would be available for most cancers since it is not so easy to synthesize a drug that can discriminate between a normal cell and a mutated one.

Keywords: Cytotoxic drugs, anti-cancer drugs, cancer specific drugs.

PP-9 Japanese Encephalitis Disease from Viral Infection

Shiwangi Dwivedi

¹College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India

Japanese encephalitis (JE) is a mosquito borne encephalitis caused by a group B arbovirus (flavivirus) & transmitted by culicine mosquito. Its problem is vast in India. Recognition of JE based on the sociological survey was first made in 1955 in Tamil Nadu JE has been reported from different parts of the country. The disease is endemic in 14 states. Assam, Bihar, Haryana, U. P, Karnataka & Tamil Nadu report outbreak every year & contribute about 80% of cases & death.

In Japanese encephalitis disease vectors are mosquito. Culicine mosquitoes, notably *C. tritaeniorhynchus*, *C. vishui* & *C. gelidus* along with some anophelines have been incriminated as the vectors of JE & the Incubation period in mosquito is 9-12 days. In man the incubation period is 5-15 day.

To control JE disease the vaccination are provided for protection throughout childhood following 2 primary doses 4 weeks apart & boosters after 1 years & Subsequently at 3 yrs intervals until age of 10-15 year, 0.5 ml given to child under 3 yrs & 1ml for children more than 3 yrs. of age. To control vectors, effective way to deal with them is to resort to aerial or ground fogging with ultralow-volume (ULV) insecticides (eg – malathion fenitration).

PP-10 Human Papillomavirus & Its Role in Cancer

Bhadoria Kiran

IDEAS Dental College Gwalior

HPVs are small DNA viruses belonging to the family Papillomaviridae. HPV have circular, dsDNA genomes typically containing 8 genes; the L1 gene encodes the principal capsidic protein, and its nucleotide sequence constitutes the basis for HPV classification into more than 120 'types', while the L2 protein is a minor virion component.

Among the genital HPVs, 15 types are considered 'high-risk' (in particular, HPV 16 and 18 that are responsible of >70% of the cancers), with over 99% of cervical lesions containing viral sequences. HPV infection requires that the virus passes through the epithelial basal layer and enters the basal cells, but the mode of entry is still debated. While many HPV types produce only productive infection, oncogenic HPV types contribute to the development of cancers, often arising at sites where productive infection cannot be supported. In these 'high-risk' HPV types, the E5, E6 and E7 genes are responsible for the production of the viral oncoproteins involved in the initiation and progression of cervical cancer.

HPV infection-attributable cancers include carcinoma of the cervix, vulva, vagina, penis, anus, oral cavity and oropharynx and tonsil. The oncogenic types found most frequently in cervical cancer (HPV-16, 18, 31, 33, 35, 45, 52, 58) and four types less constantly found (HPV-39, 51, 56, 59) were classified in group 1 by the recent IARC evaluation. Of these, HPV-16 and 18 carry, by far, the highest risk of cancer. Several comprehensive studies have confirmed that these 'high-risk' HPV types cause virtually all cases of cervical cancer worldwide. HPV-16 is also the most important cause of anal cancer

PP-11 Human papilloma virus and its role in cancer

Sharma Madhuri¹, Shrivastav Monika², Sharma Richa³

Parvati Bai Gokhle Vigyan Mahavidhyalaya, MP¹

Kamla Raja Girls College, Gwalior²

College of Life Sciences, CHRI Campus, Gwalior³

Papillomaviruses are members of the Papovaviridae family of DNA viruses, all of which are considered tumor viruses because of their ability to immortalize normal cells. They are species-specific and occur in a wide variety of vertebrates, where they cause benign and malignant epithelial proliferations. Because papillomaviruses complete their life cycle only in fully differentiated

epithelial cells, they are difficult to propagate in cell culture, which has limited the study of their life cycle, immunology, transmission dynamics, diagnosis, and therapy. Human papillomavirus (HPV) is one of the most common causes of sexually transmitted disease (STD) in the world. Health experts estimate there are more cases of genital HPV infection than any other STD in the United States. According to the Centers for Disease Control and Prevention, approximately 6 million new cases of sexually transmitted HPV infections are reported every year. At least 20 million people in this country are already infected.

Some types of sexually transmitted human papillomaviruses (HPVs) can cause genital warts. Other types, called high-risk or oncogenic HPVs, can cause cancer. High-risk HPVs cause virtually all cervical cancers. They also cause most anal cancers and some vaginal, vulvar, penile, and oropharyngeal cancers.

PP-12 Methods of molecular diagnosis of HPV

Rajavat Singh Asha¹, Singh Vinod², Shrivastav Vivek³

¹Barkatullah University, Deptt. of Microbiology, Bhopal, Madhya Pradesh, India, ²Professor& Head Deptt. of Microbiology, Barkatullah University, Bhopal, Madhya Pradesh, India, ³Professor, Deptt. of Microbiology, College of Life Sciences.

Human papillomaviruses (HPVs) contain more than 100 genotypes. HPV infection is mainly diagnosed by molecular methods, since reliable serological tools are not available and culture of the virus is not possible. Molecular diagnostic methods allow for the identification of the many unique types of high-risk HPV, which can lead to better diagnoses and treatment plans for patients. The second area for HPV testing includes vaccination trials, epidemiological and natural history studies. In contrast to the clinical application, highly sensitive and reproducible assays, which assess the broadest possible spectrum of HPV genotypes, are required. The aim of such studies is to obtain a maximum of information about HPV status in populations and to monitor the course of infections in detail. For instance, during vaccination studies, this will help determine vaccine efficacy and possible cross-reactivity with other HPV types. A single HPV assay with an adjustable cut-off for detection and linked to a genotyping method would be ideal for both areas. Some methods exist in the laboratory to detect HPV; Direct probe methods Southern transfer hybridization and in situ hybridization ISH; signal amplification hybrid capture second-generation [HC2] assay; and target amplification PCR, Real Time PCR and RT-PCR. Use of these diagnostic techniques requires consideration of the consensus guidelines for the management of women with normal and abnormal cervical screens, as well as consideration of assay clinical sensitivity and diagnostic utility. This review describes the different molecular methods available for HPV detection and genotyping and their possible clinical utility. The second area for HPV testing includes vaccination trials,

Keywords: HPV-DNA, Molecular diagnostics, Type-specific PCR, Reverse hybridization

PP-13 Role of HPV in Oral Cancer

Bhargava Neha, Singhla Navinder

Department of Hospital Administration, Jiwaji University MP

Human papilloma virus (HPV), commonly known as the virus that causes genital warts and cervical cancer in women, is increasingly being recognized as a cause of infections that colonize the back of the mouth (throat), including the tongue base and tonsils. In the last 20 years, evidence has accumulated regarding the possible association of oncogenic high-risk types of HPV with OSCC; meta-analysis assessing the risk of HPV status in OSCC and oral premalignant lesions is timely. The primary risk factors for oral carcinogenesis are tobacco and alcohol use, although new lines of evidence now suggest HPV may also be an independent risk factor. The higher prevalence of high-risk HPV strains in pre-cancerous and cancerous oropharyngeal tumour suggests that HPV may preferentially infect developing or established cancers, thereby modulating carcinogenic progression and ultimately influencing health outcomes. However, new evidence is emerging that demonstrated high-risk oral HPV infection in normal, healthy children, with the highest rates observed among children under 7 years old (7.9%-8.7%), and declining rates observed among healthy adolescents (13-20 years old; 5.1%-5.2%) and healthy adults (3.5%). These observations may suggest that oral HPV infection may occur through close personal contact with family members or through contact with fomites and other vectors at daycares canter, preschool or in primary education settings, with most children immunologically competent to resolve these infections. However, some infections may persist and their contribution to the development of oral cancers and other pathologies remains unclear. HPV has been identified in approximately 23.5% of OC cases HPV-18, HPV-31, and HPV-33. The prognostic significance of HPV in pre-cancerous oral lesion is not clear. However, few studies have found improved disease-specific survival and better prognosis for HPV positive OC.

PP-14 Telomerase Activity as a Biomarker in Cervical Cancer

¹Sharma Neha, ²Shrivastav Archana, Sharma ¹Sachin, ¹Chahar Anu

¹College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India,

²Professor and Head, Deptt. Of Microbiology, College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India.

Cervical cancer is the most common fatal malignancy of women in many developing countries. Approximate 100,000 new cases being reported annually in India. It has been proved that infection with high risk human papillomaviruses (HPVs), plays a significant role in the development of cervical cancer. Screening for cervical cancer has greater sensitivity of Papanicolaou's (Pap) smear test, however some cases remain undetected therefore the utility of assaying telomerase activity as a

possible screening biomarker. Cellular immortality and oncogenesis are being required the activation of telomerase and stabilization of telomeres. Some earlier study shown assayed telomerase activity in relation to HPV-16/18 in cervical samples ranging from normal to precancerous to malignant in the tissue biopsies and cervical scrapings. HPV infection was detected by polymerase chain reaction (PCR) in 81% of tumor samples and in cervical scraping with HPV-16. Telomerase activity was detected in 96.5% of cervical tumor samples, in 68.7% of premalignant cervical scrapings. There was a 71% correlation between telomerase activity and HPV-16/18 infection. Telomerase analysis might play a diagnostic or prognostic role in the evaluation of cervical biopsy specimens; it shows greater promise as an adjunctive marker for the triage of patients with low grade cytological abnormalities. It is unlikely that telomerase analysis will ever completely replace the Pap smear as a screening system for cervical dysplasia and cancer.

KeyWords: Cervical Cancer, Telomerase, Biomarker, diagnosis.

PP-15 Effect of Wheat Grass Juice on Oxidative Stress in Cervical Cancer

Singh Pragati, Shrivastav Vivek, Sharma Sachin, Shrivastav BR, Shrivastav Archana

Department of Biotechnology, College of Life Sciences, Cancer Hills, Gwalior, MP

preet_bud9@yahoo.com

Worldwide, cervical cancer (CaCx) is one of the third most common cancers in women. In India, cervical malignancy ranks first in women cancer. Cervical cancer incidences are mostly found in rural population due to personal hygiene, changes in lifestyle, and lack of awareness of health care. Human papillomavirus (HPV) infection is a major critical risk factor in the development of cervical cancer. Free radicals, reactive oxygen species (ROS) and reactive nitrogen species (RNS) also play an important role in the initiation and progression of multistep carcinogens is from DNA damage which is mostly caused by oxidative stress. Oxidative stress assayed by analysis of malondialdehyde (MDA), superoxide anion and H₂O₂, and antioxidant enzymes. Malondialdehyde (MDA) as an indicator of lipid peroxidation and antioxidant status. Chemotherapy is one of the promising treatments for CaCx before or after surgery. Chemotherapy has many side effects which are life threatening. Wheatgrass is popular as alternative cancer medicine for its great health benefits to the human body contains high concentrations of chlorophyll, active enzymes, amino acids, vitamins, and other nutrients. Wheat grass is believed to have many unexplained natural healing qualities. One of the ingredients with major benefit in wheatgrass is chlorophyll, which has the ability to draw toxins from the body. Wheatgrass juice to help offset chemotherapy side effects and may inhibit cancer by reducing oxidative stress. Nutritive supplements of wheatgrass juice

maintain the blood LPO level and a positive balance of antioxidants for a better outcome in terms of delayed recurrence and better Quality of Life (QOL) for CaCx patients.

PP-16 Prevalence of Human Papillomavirus in Cervical Cancer

Gupta Ruchita¹ and Bharadwaj Alok²

¹M.Sc. Microbiology, Jiwaji University, Gwalior (M.P.)

²Assistant Professor, Dept. of Biotechnology, GLA University, Mathura (U.P.)

alok.bhardwaj@gla.ac.in

Human papillomavirus (HPV) infection is now a well-established cause of cervical cancer and there is growing evidence of HPV being a relevant factor in other anogenital cancers (anus, vulva, vagina and penis) and head and neck cancers. HPV types 16 and 18 are responsible for about 70% of all cervical cancer cases worldwide. HPV is a necessary cause of cervical cancer, the leading cause of cancer deaths among Indian women. India has a population of 366.58 million women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 134420 women are diagnosed with cervical cancer and 72825 die from the disease. Cervical cancer ranks as the first most frequent cancer among women in India, and the first most frequent cancer among women between 15 and 44 years of age.

It is established that well-organized cervical screening programs or widespread good quality cytology can reduce cervical cancer incidence and mortality. The introduction of HPV vaccination could also effectively reduce the burden of cervical cancer in the coming decades. The vaccines have been shown to confer nearly 100 per cent protection against cervical pre-cancers and genital warts caused by HPV types 16/18 in HPV naive population with few or no side effects. In addition, male circumcision and the use of condoms have shown a significant protective effect against HPV transmission and may offer an alternative preventative strategy.

Key Words- Papillomavirus, Cervical cancer and HPV vaccination

PP-17 Human Papilloma Virus and its role in cancer

Parashar Deepti

BIMR College of professional studies Gwalior

Human Papilloma virus (HPV) is one of the most common sexually transmitted worldwide diseases. It has established role in malignancies such as cervical cancer. The virus has also been implicated in the oncogenesis of nongenital cancer such as head and neck malignancies (specifically oropharyngeal cancer) as well as anal cancer. There less clarity regarding their role in

lungs and esophageal cancer. Worldwide, the incidence and prevalence of HPV-associated oropharyngeal cancer has been increasing over time. These patients have improved outcomes compared with those HPV-negative oropharyngeal cancers, and there is continued interest in designing treatments specifically for this HPV-positive subgroup. Clinicians continue to gain an understanding of HPV in anal cancers and the risk factors associated with infection and progression to malignancy. These are the potential implications for the eventual screening of high-risk groups. While HPV vaccination is currently approved for the prevention of cervical cancer, it also has potential in the prevention of all HPV – associated malignancies. In this review, current understanding of the role of HPV in nongenital cancers is discussed, as well as future implications for treatment and prevention.

PP-18 Cervical Cancer: Screening Methods

Singh Rachna, Shrivastav Archana

College of Life Sciences, CHRI Campus, Gwalior (MP)

Cervical cancer is the leading cause of morbidity and mortality among women worldwide. Cervical cancer is caused by HPV (human papillomavirus) a double-stranded DNA virus. There are 30-40 genital strains, 11 of which are carcinogenic. The most common is HPV 16, HPV 18 is second. These two cause 70% of cancers. HPV slowly cause changes (cervical intraepithelial neoplasia or squamous intraepithelial lesions) in the cervix. Abnormal cells are called dysplasia. Most common cervical cancers (80-90%) are squamous cell cancers. Adenocarcinoma is the second most (10-20%).

Screening programs were implemented in developing countries since the early 1980's. It is very important to have regular examinations for dysplasia (every 6 months). Some health groups specially working to cure and research on cervical cancer are Prevention International: No Cervical Cancer (PINCC) is a group of doctors and counsellors to help women stay healthy. ACCP (Alliance for Cervical Cancer Prevention). Screening for cervical cancer includes a few tests- Pap smear (Papanicolaou) test, VIA (visual inspection with acetic acid), HPV DNA testing, colposcopy. If any areas look abnormal, a sample of the tissue will be removed by biopsy (Cervical and Cone biopsy, Endocervical curettage and LEEP (Loop Electro-Surgical Excision Procedure)). Out of them pap smear test was most prominent in screening program initially but very painful. In 2003-2004, concurrent studies were performed by the Alliance for Cervical Cancer Prevention, looking at VIA as an alternate of PAP smear. It is not painful, just a little uncomfortable. VIA is very sensitive for ectocervical lesions, its low cost and ease of use makes it very advantageous for primary screening. Once cancer has been diagnosed, additional tests are to check cancer spread in body. Tests include: Cystoscopy or proctoscopy, Computed tomography (CT), Magnetic resonance imaging (MRI), Positron emission tomography (PET).

Keywords- Dysplasia, Neoplasia, Proctoscopy, Endocervical curettage, LEEP.

PP-19 Antiviral Drug and their mode of action

Sharma Richa, Shukla Deepali, Shrivastav Vivek

Department of Microbiology, College of Life Sciences

Viruses are difficult to kill because they live inside the cells. Any drug that kills a virus may also kill cells. The history of antiviral chemotherapy as a science is short, commencing in the 1950s with the discovery of methisazone which is a thiosemicarbazone drug inhibiting the replication of poxviruses. Antiviral drugs used to treat infections caused by viruses other than HIV. Antiretroviral drugs used to treat infections caused by HIV. An anti-viral agent inhibits active replication so the viral growth resumes after drug removal. Many antiviral drugs are Purine or Pyrimidine analogs. Many antiviral drugs are prodrugs. They must be phosphorylated by viral or cellular enzymes in order to become active. Viruses controlled by antiviral drugs include Cytomegalovirus (CMV), Hepatitis viruses, Herpes viruses, Human immunodeficiency virus (HIV), Influenza viruses (the “flu”) and Respiratory syncytial virus (RSV). It must be acknowledged that the high mutation rates of the classic RNA viruses such as influenza and HIV will always result in 'resistance' problems for antiviral drugs. There are many natural antiviral drugs are also available viz. Glycyrrhizin, Gossypol, hypericin, vidarabine. Anti-herpes virus agents include acyclovir inhibit viral DNA-polymerase. Cidofovir is approved for the treatment of CMV retinitis in immunocompromised patient also inhibits viral DNA synthesis. Foscarnet treat HSV-1, HSV-2, VZV, CMV and HIV, is an inorganic pyrophosphate analog. It directly inhibits viral DNA and RNA -polymerase and viral inverse transcriptase. Influenza treated by Amantadin, Oseltamivir, Zanamavir. These are Neuraminidase inhibitors while amantadine and rimantadine causes the inhibition of viral uncoating by inhibiting the viral membrane protein M2.

Keywords- Prodrug, Glycyrrhizin, Antiretroviral drug.

PP-20 HPV Vaccine: effectiveness and Major Barrier

Shukla Deepali, Shrivastav Archana, Jana AM

Department of Microbiology, College of Life Sciences, Cancer Hospital and Research Institute

The HPV vaccine is a safe and effective option for cervical cancer prevention. HPV vaccines are a major breakthrough in the control of cervical cancer for countries like India with high disease load and without any organized screening program. The facts that HPV infection (oncogenic types) is necessary for the development of cervical cancer and that more than 70 per cent of the cervical cancers are attributed to types 16/18 led to the development of the HPV vaccines directed to HPV 16/18. Both the vaccines ready for licensing in India (Cervarix™ by GlaxoSmithKline and

Gardasil™ by Merck & Co.) have been found to be very effective in preventing persistent infection with HPV 16/18 and high grade CIN attributed to these two subtypes. The HPV vaccine is going to pose certain sociocultural obstacles due to the facts that the vaccine is against a sexually transmitted infection (STI). It is advocated only for women, at least to begin with, and the target age group is adolescent girls. The parents may not give consent and the young adult women may not be willing to go for such a vaccine. The health care providers may also be reluctant to recommend the vaccine to general population due to their personal beliefs and anxieties about the parental reactions. Some parents may get concerned that if they give consent for administering HPV vaccine to their daughters that may convey a 'no objection to sex' message to them. The entry price for HPV vaccine appears to be unaffordable from public health point of view. In addition to the HPV vaccine costs, other expenses incurred due to vaccine wastage, freight, maintaining the cold chain, transport cost need to be financed. the HPV vaccine has certain potential problems that may interfere with its widespread acceptance in the general population.

OP-21 *P. freudenreichii* fermented milk kills human gastric and colon cancer cells

Bhadkariya Rajni

School of Studies in Microbiology Jiwaji University Gwalior

Propionibacterium freudenreichii, a food-grade bacterium able to kill colon cancer cell lines in vitro by apoptosis, may exert an anticarcinogenic effect in vivo. Gastric cancer is one of the most common cancers in the world. The “economically developed countries” life style, including diet, constitutes a risk factor favoring this cancer. Diet modulation may lower digestive cancer incidence. Among promising food components, dairy propionibacteria were shown to trigger apoptosis of human colon cancer cells, via the release of short-chain fatty acids acetate and propionate.

Fermented milk, exclusively fermented by *P. freudenreichii*, was recently designed. In this work, the pro-apoptotic potential of this new fermented milk was demonstrated on HGT-1 human gastric cancer cells. Fermented milk supernatant induced typical features of apoptosis including chromatin condensation, formation of apoptotic bodies, DNA laddering, cell cycle arrest and emergence of a subG1 population, phosphatidylserine exposure at the plasma membrane outer leaflet, reactive oxygen species accumulation, mitochondrial transmembrane potential disruption, caspase activation and cytochrome c release. Remarkably, this new fermented milk

containing *P. freudenreichii* enhanced the cytotoxicity of camptothecin, a drug used in gastric cancer chemotherapy.

Such new probiotic fermented milk may thus be useful as part of a preventive diet designed to prevent gastric cancer and/or as a food supplement to potentiate cancer therapeutic treatments.

PP-22 Cervical Cancer Risk Factor and Prevention

Shukla Piyush, Jaswani Pradeep, Sinha Nikhil

Molecular and Human genetics ,Jiwaji university ,Gwalior

Cervical cancer is still one of the most common cancers among women worldwide. The estimated annual incidence cases and deaths in the low- and middle-income countries (LMIC) is more than 450,000 and 240,000, respectively. More than 88% of deaths are estimated to occur in these LMIC countries and this percentage is predicted to climb to at least 91.5% by 2030. Cervical cancer was the most common cancer in Indian women. Factors contributing to cervical cancer HPV is a necessary cause of cervical cancer, but it is not a sufficient cause. Other cofactors are necessary for progression from cervical HPV infection to cancer. Tobacco smoking, high parity, long-term hormonal contraceptive use, and co-infection with HIV have been identified as established cofactors. Co-infection with *Chlamydia trachomatis* and herpes simplex virus type-2, immunosuppression, and certain dietary deficiencies are other probable cofactors. Genetic and immunological host factors and viral factors other than type, such as variants of type, viral load and viral integration, are likely to be important but have not been clearly identified.

It is established that well-organized cervical screening programs or widespread good quality cytology can reduce cervical cancer incidence and mortality. The introduction of HPV vaccination could also effectively reduce the burden of cervical cancer in the coming decades. In addition, male circumcision and the use of condoms have shown a significant protective effect against HPV transmission and may offer an alternative preventative strategy.

PP-23 Impacts of Spirulina on cancer: An Overview

Kulshrestha Renu

J. C. Mills Girls P. G. College, Birlanagar, Gwalior
kulshreshtha31@gmail.com

Spirulina is a cyanobacterium that can be consumed by humans and other animals and is made primarily from two species of [cyanobacteria](#): [Arthrospira platensis](#) and [Arthrospira maxima](#). *Arthrospira* is cultivated worldwide; used as a [dietary supplement](#) as well as a [whole food](#); and is available in tablet, flake and powder form. It is also used as a [feed](#) supplement in the [aquaculture](#), [aquarium](#) and [poultry](#) industries. *Spirulina*, a filamentous blue green alga derives its name from the spiral nature of its filaments and grows vigorously under intense sunshine, high temperature and

alkaline conditions. *Spirulina* has a long history of being used as safe food (Belay, 2002). Early reports focused mainly on its highly nutritious & rich contents of protein (60-70% by weight), vitamins, essential amino acids, fatty acids and minerals. *Spirulina* contains antioxidants that enhance the immune system. It appears to increase production of anti-inflammatory chemicals such as “**interferon and interleukins**”. The antioxidant and immune-enhancing properties in *Spirulina* may help fight cancer. It also helps to release tumor necrosis factor alpha, a chemical in the body that attacks tumor cells (Marry, 20 08). This immune system / cancer link explains why spirulina effectively prevents cancer. Spirulina is best known as an immune booster, and this property has medicinal implications far beyond cancer prevention. In *A Natural Physician's Healing Therapies*, Mark Stengler, ND, writes, "Spirulina stimulates natural killer cells and similar anti-immune components of the immune system that can help fight cancer cells." Furthermore, these spirulina-stimulated killer cells can fight illnesses other than cancer, ranging from the common cold to HIV. Some nutrients of spirulina such as beta carotene, iron, manganese, zinc, copper, selenium, and chromium help fight free radicals, cell-damaging by removing free radicals, the nutrients help the immune system fight cancer and cellular degeneration. In some findings, Spirulina has helped reduce oral cancer tumors in laboratory rats, and may thus provide a big medical breakthrough in cancer treatment. More than 100 published scientific references help support the case for the health benefits of spirulina. The extracts of *Spirulina* which contain natural colouring pigments are employed as colouring agents in food and cosmetic preparation. Certain restriction enzymes have also been isolated from *Spirulina* for genetic research. It is highly nutritious and is an excellent source of protein, chlorophyll, vitamins, minerals, and amino acids. molecules absorbed by the body through pollution, poor diet, injury or stress.

PP-24 Association of CCND1 Gene Polymorphism with Cervical Cancer

Mahant Richa Nayak¹, Rai Meenu², Rathore DS¹

¹Department of Biotechnology, Govt. Kamla Raja Girls Post Graduate (Autonomous) College, Gwalior, M.P (India).

²Department of Biotechnology, College of Life Sciences (CHRI), Gwalior (M.P.) India.

richa_mahant@rediffmail.com

Cervical cancer is the second most common cancer in women worldwide. The risk of cervical cancer development and prognosis may be associated with genetic variation in CCND1 genotype. Single nucleotide polymorphism is an abundant source of genome divergence and focus of much research at present. Such a SNP at nucleotide 870 (G870A) of the CCND1 gene has been identified which leads to unregulated cell cycle and division. Cervical carcinoma results due to alterations in the cell cycle checkpoint machinery. Normal cells require mitogenic growth signals to move from a quiescent G₀ state into an active, proliferative state. Alteration in growth signals directly affects the Cyclin D1 gene, which is a key regulator of the cell cycle at G₁/S checkpoint and demonstrated as an oncogene in the case of tumor growth. A common G/A SNP at 870 locus of CCND1 gene increased the expression of Cyclin D1 and leads to several types of cancer including cervical cancer. The marked differences in Cyclin D1 polymorphism frequency raise the possibility of significance for cancer treatment. SNP has the potential to provide a useful tool for selection of therapy. Cervical cancer

patients with an AA or AG genotype may require more aggressive or experimental therapy whereas the GG genotype not. Therefore CCND1 polymorphism may have important Clinical implications for patient prognosis, help explain ethnic variation in cervical cancer outcome and provide a target for improving survival.

Keywords: Cervical Cancer, Cyclin D1, Cell Cycle, SNP, genotype, polymorphism, CCND1

PP-25 Chemo preventive and chemotherapeutic effects of Antioxidants (Polyphenols) in cervical cancer: A Current Review

Vashisth Pranav¹, Mishra Priya², Jain Vinay¹

¹Department of Pharmacology, S.R.C.P. Banmore, Morena, (M.P.)

²Institute of Pharmaceutical Science, GGV, Bilaspur, (C.G.)

pranavyagi87@gmail.com

Globally, cervical cancer is one of the most common cancers in women, representing up to 25% of all female cancers, and is the most common cancer in developing countries. The recognized etiological factor in the causation of cervical cancer is the infection with human papilloma virus (HPV). HPV infection, although necessary, but not sufficient to induce cancer. Other factors have to be involved in the progression of infected cells to the full neoplastic phenotype. Oxidative stress represents an interesting and under-explored candidate as a promoting factor in HPV initiated carcinogenesis. Oxidative stress is known to perturb the cellular redox status thus leading to alteration of gene expression responses through the activation of several redox sensitive transcription factors. This signaling cascade affects both cell growth and cell death. The ability of naturally occurring antioxidants to modulate cellular signal transduction pathways, through the activation/repression of multiple redox sensitive transcription factors, has been claimed for their potential therapeutic use as chemopreventive agents. Among these compounds, polyphenols have been found to be promising agents toward cervical cancer. In addition to acting as antioxidants, polyphenols display a wide variety of biological function including induction of apoptosis, growth arrest, inhibition of DNA synthesis and modulation of signal transduction pathways. The present review discusses current knowledge of the major molecular pathways, which are involved in HPV-driven cancerogenesis, and the ability of polyphenols to modulate these pathways. By acting at specific steps of viral transformation cascade, polyphenols have been demonstrated to selectively inhibit tumor cell growth and may be a promising therapeutic tool for treatment of cervical cancer.

Keywords: Cervical cancer, HPV, Polyphenol, Apoptosis, Oxidative stress

PP-26 Prevention of Cervical Cancer

Jumnani Abhilasha, Bhadouria Manoj

Shri R.N.S. Institute of Pharmaceutical Sciences, Sitholi Gwalior
abhilasha.jumnani@gmail.com/manu_u21@rediffmail.com

Cervical cancer is cancer that starts in the cervix. The cervix is the lower part of the uterus (womb) that opens at the top of the vagina. It is the second most common cause of cancer death in women worldwide and the development of new diagnosis, prognostic, and treatment strategies merits special attention. Although surgery and chemo radiotherapy can cure 80%–95% of women with early stage cancer, the recurrent and metastatic disease remains a major cause of cancer death. It is much less common in the United States because of the routine use of [Pap smears](#).

Cervical cancers start in the cells on the surface of the cervix. There are two types of cells on the surface of the cervix, squamous and columnar. Most cervical cancers are from squamous cells.

Cervical cancer usually develops slowly. It starts as a precancerous condition called [dysplasia](#). This condition can be detected by a Pap smear and is 100% treatable. It can take years for these changes to turn into cervical cancer. Most women who are diagnosed with cervical cancer today have not had regular Pap smears or they have not followed up on abnormal Pap smear results.

Almost all cervical cancers are caused by HPV (human papilloma virus). HPV is a common virus that is spread through sexual intercourse. There are many different types (also called strains) of HPV. Some strains lead to cervical cancer. Other strains can cause [genital warts](#). Yet others do not cause any problems at all.

Thus, in this review article we discuss potential targets for the prevention of cervical cancer associated with HPV infection and some strategies to treat it.

Keywords: cervical cancer, clinical trials, gene therapy, HPV E6 and E7 oncogenes, siRNAs

PP-27 Cervical Cancer in India-Risk Factor and Management

Kulkarni Sunisha

S.O.S. in Pharmaceutical Sciences, Jiwaji University, Gwalior
sunishakulkarni2007@gmail.com

Cancer that affects the cervix, the lower part of the uterus (the organ connecting the uterus and the vagina) is known as cervical cancer. This is generally a slow growing cancer and pre-malignant. The common risk factors include: Human Papilloma Virus infection (HPV), a common virus that is spread through sexual intercourse, early marriage or early sexual activity, presence of multiple sex partners, presence of sexually transmitted diseases, having multiple consecutive pregnancies, etc. The incidence of cervical cancer is higher in rural areas than in metros. In metros, [breast cancer](#) is very common. Herpes is a cause for cervical cancer. Then again, bad local hygiene, low nutrition levels and early marriage all contribute to the risk factors for this kind of cancer. It's tragic that

[cervical cancer](#) mostly hits the young population - young women, [women](#) with growing children - whose lives seem shattered after they come to know of it.

The symptoms to watch out for are post-coital bleeding; continuous, smelly vaginal discharge; bleeding between the menstrual cycle and irregular periods. In the more advanced stages, there could be [back pain](#), bone pain or fractures, fatigue, loss of appetite, a single swollen leg and pelvic pain.

But the most important thing to understand is that it is completely preventable and, therefore, all you need is awareness to protect yourself from it. Early detection of cervical cancer is very important, as the cure rates are much higher (90-100%) if the cancer is diagnosed on time. Vaccination against HPV at an early age is the best way to prevent the disease. The tragedy, however, is that because of lack of knowledge and it-cannot-happen-to-me attitude; it is the most common kind of cancer in India today.

Keywords: HPV, completely preventable, early detection

PP-28 The Role of Diindolylmethane in the Prevention and Treatment of Cancer

Bhargava Sunita

Department of Chemistry, College of Life Sciences CHRI, Gwalior, MP. India, 474009
sunita71bhargava@gmail.com

Cancer is a major public health burden in both developed and developing countries. It was estimated that there were 10.9 million new cases, 6.7 million deaths. Although there are several treatment approaches for cancer, major drawback of these systems is the toxicity which may even lead to death. . Development of Non-toxic drugs which can be useful in cancer treatment is the most important need of the hour. Of the 92 anticancer drugs commercially available prior to 1983 in the US and among worldwide approved anticancer drugs between 1983 and 1994, 60% are of natural origin. Improved cytotoxic agents continue to be an important line in the discovery of modern anticancer drugs. Herbal drugs have been used in the treatment and prevention of various diseases including cancer. Diindolylmethane (DIM), a phytochemical. Phytochemicals is generally referred to the compounds exclusive of essential nutrients that have specific biological activity to human. It has been known that over 10,000 different phytochemicals possess the potential preventive or supplementary effect on various diseases. From several decades ago to now, cancer continues to be the leading-lethal cause worldwide. Studies have shown that natural phytochemicals derived from certain plants have the capability to prevent carcinogenesis. Diindolylmethane (DIM), a phytochemical found in cruciferous vegetables such as cabbage, Brussels sprouts, broccoli, and kale, appears to cause infected cells to die. Cervical cancer is a common cancer of the female reproductive system, specifically the cervix of the uterus. Cervical

cancer can be fatal if left untreated. The good news is that cervical is highly preventable and treatable if caught in its early stage. DIM could cause cell death of both human cervical cancer cells and the HPV-16-infected cervical cells of mice. Another promising study was done on a form of the phytochemical called indole-3-carbinol (I3C), which is released when you chew or crush a cruciferous vegetable and is immediately converted to DIM. Most research has focused on this phytochemical's ability to normalize estrogen metabolism, since estrogen plays a role in cervical cancer.

Key words: Phytochemical, DIM, biological activity, carcinogenesis.

PP-29 Human Papillomavirus and its association with Cancer

Archana Saraswat¹, Ambika Goyal¹, Nishi Dubey¹, Udit Tiwari¹

¹Department of Biochemistry, Dr. BR Ambedkar University, Agra

HPVs infect epithelial cells and cause a variety of lesions ranging from common warts to cervical neoplasia and cancer. Over 100 different HPV types have been identified so far, with a subset of these being classified as high risk. High risk HPV DNA is found in almost all cervical cancers (>99.7%), with HPV16 being the most prevalent type in both low grade diseases and cervical neoplasia. Productive infection by high risk HPV type is manifest as cervical flat warts or condyloma that shed infectious virions from their surface. Viral genomes are maintained as episomes in the basal layer, with viral gene expression being tightly controlled as the infected cells move towards the epithelial surface. The pattern of viral gene expression in low grade cervical lesions resembles that seen in productive warts caused by other HPV types. High grade neoplasia represents an abortive infection in which viral gene expression becomes deregulated, and the normal life cycle of the virus cannot be completed. Most cervical cancers arise within the cervical transformation at the squamous/columnar junction and it has been suggested that this is a site where productive infection may be inefficiently supported. The high risk E6 and E7 proteins drive cells proliferation through their association with PDZ domain proteins and retinoblastoma, and contribute to neoplastic progression; whereas E6 mediated P53 degradation prevents the normal repair of chance mutations in the cellular genome. Cancers usually arise in individuals who fail to resolve their infection and who retain oncogene expression for years or decades. In most individuals, immune regression eventually leads to clearance of the virus, or to its maintenance in a latent or asymptomatic state in the basal cells.

Keywords: neoplasia, virions, oncogene, transformation

PP-30 Epidemiology of cervical cancer and its association with human papillomavirus

¹Chahar Anu, ²Shrivastav Archana, ³Shrivastav B.R, ¹Sharma Neha

¹ College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India, ²Professor and Head, Deptt. Of Microbiology, College of Life Sciences, CHRI Campus, Gwalior, Madhya Pradesh, India, ³Director, Cancer Hospital and Research Institute, Gwalior, Madhya Pradesh, India

Human Papillomavirus is the foremost etiological agent for cervical cancer, the third most common cancer among women worldwide. Every year, estimated 530000 new cases and 275000 deaths were recorded of which about 85% occurred in developing countries. The current estimates indicate approximately 132000 new cases diagnosed & 74000 deaths annually in India, accounting to nearly 1/3rd of the global cervical cancer deaths. Indian woman faces a 2.5% cumulative lifetime risk & 1.4% cumulative death risk of cervical cancer. The human Papillomavirus (HPV) is a non-enveloped double-stranded DNA virus that belongs to the Papillomaviridae family. It infects only epithelial cells in human such as skin & mucus membranes. More than 120 different types of the human Papillomavirus (HPV) have been isolated; more than 40 of these types infect the epithelial lining of the anogenital tract and other mucosal areas. HPV 16 and 18, the two most common oncogenic types, cause approximately 70% of all cervical cancers worldwide. Effective early screening and treatment, mainly using cytology-based (Pap) testing, has resulted in a steady drop in cervical cancer incidence and mortality in high-resource settings like the US and Europe. Worldwide, pooled data from case control studies indicated that HPV DNA could be detected in 99.7% of women with histologically confirmed squamous cell cervical cancer compared with 13.4% of control women. On the other hand, two prophylactic vaccines, Cervarix and Gardasil, are already in a very advanced phase of implementation at the world level. In this article, we discuss the epidemiology of HPV and significant issues surrounding the natural history of HPV infection, finally, we discuss strategies for preventing HPV infection.

Key Words: Human Papillomavirus, Cervical cancer, Epidemiology, Infection

PP-31 Protein Profiling: An Early Diagnosis of Cervical Cancer

Soni Ankita¹, Kaushik Shuchi², Shrivastav Archana³

Department of Biotechnology, College of Life Sciences (CHRI), Gwalior (M.P.)

Cancer represents a major class of morbidity and the primary cause of death in the segment of active population. Improvement of therapeutically outcomes depends on more precise and

earlier diagnostics, and biomarkers discovery and validation are considered the key for this, and also an essential tool in drug discovery.

Omics technologies are intensely involved in biomarkers research. Large-scale profiling methods have uncovered numerous gene and protein expression changes that correlate with tumorigenesis. SELDI platforms have been used to identify protein biomarkers in a variety of cancers, resulting in promising diagnostic strategies. The application of HPLC-LIF protein profiling combined with PCA was found to be a highly efficient method for discrimination of different classes of samples with high sensitivity and specificity.

More than 98% of cases are related to a human papillomavirus (HPV) infection. Infection with specific subtypes of HPV has been strongly implicated in cervical carcinogenesis. The identification and functional verification of host proteins associated with HPV E6 and E7 oncoproteins may provide useful information for understanding cervical carcinogenesis and the development of cervical cancer-specific markers. In addition, proteomic profiling of altered proteins by anticancer drugs on cervical cancer cells may contribute to providing the fundamental resources for investigation of disease-specific target proteins, elucidation of the novel mechanisms of action and development of new drugs. This review describes the studies where profiles of protein expression in cervical cancer have been generated.

Keywords: Proteomics, Biomarkers, molecular diagnostic techniques

PP-32 The micronucleus assay: a prognosis method for the detection of oral squamous cell carcinoma and oral premalignancies associated with HPV

Agarwal Ankit¹, Ahuja Rinky², Tijare Manisha

Postgraduate Student Department of Oral Pathology and Microbiology, Peoples College of Dental Science and Research Centre

Squamous cell carcinoma is one the most common oral mucosal malignant tumor, Human papillomavirus (HPV) infection of the mouth and oropharynx can be acquired by a variety of sexual and social forms of transmission. HPV-16 genotype is present in many oral and oropharyngeal squamous cell carcinoma. It has an essential etiologic role in the development of oropharyngeal squamous cell carcinoma in a subset of subjects who are typically younger, are more engaged with high-risk sexual behavior, have higher HPV-16 serum antibody titer, use less tobacco and have better survival rates than in subjects with HPV-cytonegative oropharyngeal squamous cell carcinoma, diagnosis of oral squamous cell carcinoma rarely presents difficulty, it is the cancer staging and histopathological grading that are more important for prognostication, micronuclei are good prognostic indicators. Micronuclei could be screened, with ease by exfoliative cytology one of the most valuable diagnostic method other than routine histopathology (H and E-stained sections), exfoliative cytology, and immunohistochemistry .It has been used in the detection of oral squamous cell carcinoma and has been shown to have a

sensitivity of 94%, specificity of 100%, and an accuracy of 95% MN frequencies were also found to be raised with increasing histological grades of squamous cell carcinoma.

Keywords: Exfoliative cytology, Micronuclei, Squamous cell carcinoma.

PP-33 Nanotechnology and Biocomputational Science: A Possible Alternative for the Treatment of Cancer

Verma Rahul¹ and Shrivastava Ashish²

¹Department of Biotechnology, S. V. College, Sehore – 466001 (India), ²Department of Biotechnology C.S.A. Govt. P. G. Nodal College Sehore - 466001 (India)

Nanotechnology provides the field of medicine with promising hopes for assistance in diagnostic and treatment technologies as well as improving quality of life. Humans have the potential to live healthier lives in the near future due to the innovations of nanotechnology. In this review we consider each of these hurdles and examine how nanotechnology can help to address them. The role of biocomputation will be explored as a means to specify cancer drug therapy, with the goal of applying the results in the clinical setting, especially the modeling of drug delivery via nanoparticles. Biocomputation could save lives and enhance the quality of cancer treatment by making it possible to tailor therapy to the individual patient and reduce the time and costs involved. With these goals in mind, we will look in more detail at the system-level biocomputation of tumor growth and cancer therapy, and raise considerations for future research. We begin by briefly reviewing the advantages of nanotechnology, its application to cancer chemotherapy, and its challenges in a biological setting.

Keywords: Nanotechnology, Biocomputation, Nanoparticles, Cancer.

PP- 34 Viral infections Hepatitis B (HBV) and Hepatitis C (HCV) development in chronic infection

Dwevedi Manish K.¹, Sahu Deepa¹, Pandey Rajesh¹, Mishra Neeti¹ and Kumar Narendra²

¹Department of Biochemistry, Awadesh Pratap Singh University, Rewa (M.P.) 486003 India.

²Department of Microbiology, Jiwaji University, Gwalior (M.P.) India

Email: rajeshrdu29@gmail.com, nkrathore1@gmail.com,

Hepatitis B (HBV) and hepatitis C (HCV) viral infection or co-infection escorts to risk for expansion of chronic infection, cirrhosis and hepatocellular carcinoma (HCC) etc. Globalizations have affixed to the challenges of community health concerns with chronic HBV and HCV infections worldwide. The existing global literature across ethnic populations on HBV

and HCV related human leukocyte antigen (HLA) associations in relation to susceptibility, viral persistence and treatment. Extensive literature explored the human leukocytes antigen associations in case of HBV and HCV infections across global populations over the past decade to recognize the awareness status, malnutrition, weaknesses and strengths of this information in different ethnic communities/populations. Specific targeted oriented therapeutic/medication strategies for clearance of HBV and HCV infections or co-infections across global populations and aid in identification of HBV-HCV combined vaccine are needed. Chronic HBV or HCV development with confounding host factors including alcohol, drug abuse, insulin resistance, age and gender are lacking and warrant detailed investigation across global populations.

PP- 35 Early viral fever diagnosis with simple home remedies

Gupta Shriti¹, Jaiswal Sagar¹, Pandey Rajesh¹, Mishra Neeti¹ and Kumar Narendra²

¹Department of Biochemistry, Awadesh Pratap Singh University, Rewa (M.P.) 486003 India.

²Department of Microbiology, Jiwaji University, Gwalior (M.P.) India

Email: rajeshrdu29@gmail.com, nkrathore1@gmail.com,

Viral fever is so common that we neglect them at their onset. Viral fever is any fever caused by one of the many viral infections. Symptoms can be generalized but they may target a specific organ of the body. Symptoms are many but most of them are so common medical conditions like fatigue, cough, sore throat etc. Whenever a virus enters human body, it takes its incubation period to multiply itself to such number that causes infection. Fatigue Body as well as muscle aches, low or high fever, inflammation of the pharynx, running nose, nasal congestion, sore throat, headache, redness and burning sensation in eyes, Cough, Muscle and joint pains, Skin rashes, Diarrhea. It is not essential that everyone suffering from viral fever will feel all the symptoms. If we are able to recognize the viral fever symptoms early, we can always treat it with simple home remedies without taking help of medicines. Good amount of fluids but not milk, however, if having diarrhea avoids taking fruit juices, salad or raw food, raw garlic, onions. We can also use them in cooking, best would be to make soup having lots of garlic and onion. Soak munakkas mix with honey, fresh lemon juice and ginger juice and have it at least twice or thrice a day. Make a concoction by mixing juice of tulsi, ginger juice and honey and have it for treating the symptoms of fever, cough and cold. Gargle with lukewarm water after adding a little salt in it to get relief from sore throat caused by viral fever. Raw tulsi (basil) leaves can be chewed for getting relief from viral. For diarrhea due to viral fever in children, take a pinch full of black pepper powder and mix it in tea and let the kid have few teaspoonful of this.

PP-36 Cu and Ni (inorganic-Complexes) with amino acids for the design of antiviral drugs

Dwivedi Susmita¹, Dahiya Vijay¹, Pandey Rajesh¹, Mishra Neeti¹ and Kumar Narendra²

¹Department of Biochemistry, Awadesh Pratap Singh University, Rewa (M.P.) 486003 India.

²Department of Microbiology, Jiwaji University, Gwalior (M.P.) India

Email: rajeshrdu29@gmail.com, nkrathore1@gmail.com

Effective vaccines have led, or might lead, to the eradication of important viral pathogens, such as smallpox, polio, measles, mumps and rubella. But other viral diseases, particularly human immunodeficiency virus (HIV) and hepatitis C virus (HCV), have so far proved to be intractable to the vaccine approach. The need for effective antiviral drugs is further emphasized by the lack of vaccines for most of the virus infections (adenovirus, rhinovirus, the widely occurring human papilloma viruses (HPV) and herpesviruses (herpes simplex virus types 1 and 2 (HSV-1, -2), cytomegalovirus (CMV), human herpesviruses types, and the vast array of haemorrhagic fever viruses. Although vaccines have been developed for hepatitis B virus (HBV) and influenza virus types A and B, their use has not eliminated the need for effective chemotherapeutic agents. Recently antiviral drug designed principle based on inorganic element like Cu and Ni or substitute which directly, targeted at either viral proteins or cellular proteins with binding of amide and amino acids like bioactive compounds. The first approach is likely to yield more specific, less toxic inorganic compounds, with a high spectrum of antiviral action and a less likelihood of virus drug-resistance development, whereas the second approach might afford antiviral compounds with a broader activity spectrum and high chance of resistance development, but higher likelihood of toxicity. The entries of inorganic compounds with bioactive compounds/matter potentially participate in the curing of viral infections.

PP-37 Anti-tumor Potential of Active compounds of Wild Mushrooms from Rajouri Dist. of Jammu and Kashmir (J&K), India

Nidhi Anand*, P.N. Chowdhry

National Centre of Fungal Taxonomy (NCFT), New Delhi, India.

*Corresponding author: anand.nidhi608@gmail.com

Natural products have been closely linked through the use of traditional medicines and natural poisons. Mushrooms have an established history of use in traditional oriental medicine, where most medicinal mushroom preparations are regarded as a tonic, that is, they have beneficial health effects without known negative side-effects and can be moderately used on a regular basis without harm. Mushrooms comprise a vast and yet largely untapped source of powerful new

pharmaceutical products. In particular, and most importantly for modern medicine, they represent an unlimited source of compounds which are modulators of tumour cell growth. Furthermore, they may have potential as functional foods and sources of novel molecules. In the present study, we have reviewed the compounds with antitumor potential in some of the wild varieties of mushroom of Rajouri Dist. of Jammu and Kashmir region. The main anti-tumor compounds prominent in such species comprises low-molecular-weight (LMW, e.g. quinones, cerebrosides, isoflavones, catechols, amines, triacylglycerols, sesquiterpenes, steroids, organic germanium and selenium) and high-molecular-weight compounds (HMW, e.g. homo and heteroglucans, glycans, glycoproteins, glycopeptides, proteoglycans, proteins and RNA-protein complexes).

Key words: Wild mushrooms, anti-tumor compounds, J&K region

PP- 38 Phytochemicals/Active Principle (s): Potential Anticancer agents

Abhishek Mathur¹, Deepika Mathur²

¹Institute of Transgene Life Sciences, Dehradun (U.K), India

²Jawahar Lal Nehru Cancer Hospital & Research Centre, Bhopal (M.P), India

*Corresponding author: deepika11.mathur@gmail.com

An attempt has been made to review some medicinal plants used for the prevention and treatment of cancer in India. The medicinal plants contain several phytochemicals such as vitamins (A, C, E and K), carotenoids, terpenoids, flavonoids, polyphenols, alkaloids, tannins, saponins, enzymes, minerals, etc. These phytochemicals possess antioxidant activities, which prevent or can be used in the treatment of many diseases, including cancer. Herbal drugs are also known to have good immuno-modulatory properties. These act by stimulating both non-specific and specific immunity.

Key words: Medicinal plants, phytochemicals, immuno-modulatory, anticancer

PP-39 FOODS THAT HELP FIGHT CERVICAL CANCER

Neha Sharma*, Pragya Saxena and D. S. Rathore

Department of Biotechnology, Kamla Raja Post graduate (autonomous) college, Gwalior (M.P.)

[*drneha16may@gmail.com](mailto:drneha16may@gmail.com)

Eating well is important before, during, and after cancer treatment. Patients need the right amount of calories to maintain a good weight. The National Cancer Institute estimates that roughly one-third of all cancer deaths may be diet related. Women who suffer from cervical dysplasia always

have lower levels of folic acid in their body as compared to normal healthy women. Folic acid can be given orally in tablet form but it is also important to have good natural sources of folic acid. Foods like citrus fruits, nuts, green leafy vegetables, whole grains, potatoes, turnips, fresh orange juice and bran are all rich sources of folic acid and hence must be included in a diet for cervical cancer patients.

Other than these foods an anti cervical cancer diet should also include yellow orange vegetables, multivitamin supplements and foods which have rich content of beta carotene which can generally be found in carrots, spinach, broccoli and eggs and niacin which is found in milk and whole grains. Food like seaweed, garlic, mushrooms, yeast, Brazil nuts, cashew nuts, asparagus and grains contain the mineral selenium which helps in preventing cervical cancer. However, selenium containing foods should be consumed in limitation as excess can cause side effects like hair fall and also affect the nervous system. Vitamin E and selenium taken in combination under medical supervision can increase the production of anti-bodies in the body and being good antioxidants, they can help fight cervical cancer.

Therefore including foods that fight cervical cancer in daily diet not only helps to prevent such cancers but also helps in stopping these cancers from progressing. Adding nutritious and colorful foods to all three meals in daily diet can be a big help in preventing cervical cancer.

Key words: - cervical cancer, anti cervical cancer diet, antioxidants

PP-40 CANCER AND MICROORGANISMS

Shweta Sao¹, Saurabh Dubey²,

¹Dr. C.V. Raman University, Kota, Bilaspur, Chhattisgarh

²Shambhunath Institute of Pharmacy, Jhalwa, Allahabad

Cancer or malignant neoplasm is a class of disease in which a group of cells display the trait of uncontrolled growth, invasion and metastasis. Cancer is a leading cause of death worldwide. Peptic ulcer (stomach cancer), gastritis and cervical cancer is mainly caused by selected strains of *Helicobacter pylori* and *Papilloma* virus. Colonization of *Helicobacter pylori* in stomach lumen and upper part of small intestine results in chronic Gastritis and peptic ulcer. *Papilloma* virus is suggested to cause the cancer of cervix.

There are variety of Plants extract have antibacterial activity against *Helicobacter pylori* and cytotoxic effect against cancer cell lines. *Argimone maxicana* plant extract may play important role in minimizing the complications of peptic ulcer and cervical cancer. This study mainly focuses on confirming the role of Flavonoids and alkaloids extracted from *Argimone maxicana* minimizing the complication of Peptic ulcer and cervical cancer.

Key Words-*Helicobacter pylori*, *Papilloma* virus, peptic ulcer, gastritis, cervical cancer *Argimone maxicana*.

PP-41 Cultivation of mushroom and its anticancerous activities

Gupta Madhu

Department Of Botany,
College Of Life Sciences, CHRI Campus,
Gwalior (M.P.).

E-mail- guptamadhu649@gmail.com

The several white rot fungi are edible mushrooms and are saprophytic basidiomycetes, which have been successfully, cultivated at commercial level worldwide using lignocelluloses wastes as substrates for their cultivation. *Pleurotus florida* is a wood digesting fungi, which was first cultivated on logs. Oyster mushroom can be grow at moderate temperature ranging from 22 to 28. Mushrooms are being used as a food item from the Paleolithic not less than 2000 years; it is a nutritional source of vegetarian delicacy and a suitable substitute of meat and eggs. Mushroom farming is being practiced in more than 100 countries. India had been known world over for its exotic mushrooms. At present 3 mushrooms are being cultivated in India. There has been a recent upsurge of interest in mushrooms not only as health vegetables but also as a source of biological active compounds of medicinal value, including use as complementary medicine/ dietary supplements for anticancer, antiviral, immunopotentiating and hepatoprotective agents. Mushroom and their root like structure (mycelium) produce several medicinal or nutraceutical compounds, central of which are the polysaccharides, triterpenes and immunomodulatory proteins. Certain mushroom species have been found to contain polysaccharides which are particularly effective in retarding the progress of various cancer and other diseases, and in alleviating the side effects of chemotherapy and radiation treatment.

Key-words- Mushroom, Cultivation, Lignocelluloses wastes Anticancerous

PP-42 THE CARCINOGENIC POTENTIAL OF E6 & E7 GENES OF HIGH-RISK HPV AS COMPARATIVES WITH E6 , E7 GENES OF LOW-RISK HPV IN HUMAN CERVICAL CANCER

Gill Sher Singh, Jana A.M, Shrivastav Archana, Sharma Sachin, Sharma Arvind

Department of Microbiology, College of Life Sciences, Cancer Hospital & Research Institute Campus, Gwalior (M.P.), E-mail id:- shersinghgill84@yahoo.com

Human papillomavirus (HPV) is one of the most common causes of sexually transmitted disease in both men and women worldwide. Genital HPV types are divided into high and low-risk types, according to the oncogenic gene potential. Molecular and epidemiologic studies have confirmed the interaction between high risk HPV types (especially HPV-16 and HPV-18) and cervical squamous cell carcinoma. In high grade Intra epithelial neoplasias and invasive cancers, generally Integration of HPV-DNA into

the host genome, disrupts or deletes the E2 region, which results in loss of its expression. The E6 and E7 gene products deregulate the host cell growth cycle by binding and inactivating two tumor suppressor proteins: the tumor suppressor protein (p53) and the retinoblastoma gene product (pRb). The HPV E6 gene product binds to p53 and targets it for rapid degradation. And leads to an increased expression of E6 and E7 genes. The inactivation of p53 and pRb proteins can give rise to an increased proliferation rate and genomic instability. As a consequence, the host cell accumulates more and more damage DNA that cannot be repaired, leading to transformed cancerous cells. In addition to the effects of activated oncogenes and chromosome instability, potential mechanisms may changes to transformation in the host genome such as methylation of viral and cellular DNA, telomerase activation, and hormonal and immunogenetic factors. Low-risk HPV E6 proteins do not bind p53 at detectable levels and have no effect on p53 protein stability *in vitro*. The E7 protein of low-risk HPV types binds pRb with decreased affinity.

Key words:-Cervical cancer - cervical intraepithelial neoplasia (CIN) - HPV – screening-risk factors.

PP-43 Pap smear; Cervical Cancer Screening in India

Duseja usha

Department of Biochemistry, College of Life Sciences CHRI Campus, Gwalior

E-mail usha.duseja19@gmail.com

Cervical cancer is one of the most preventable types of cancer. Because of the Pap smear test, the number of cervical cancer cases has dropped over the past twenty years. However, many women still develop cervical cancer. In fact, over 9,000 women in the U.S. develop cervical cancer every year. While some cases of cervical cancer cannot be prevented, there are many things a woman can do to reduce her risk of developing cervical cancer. Get a regular Pap smear. The Pap smear can be the greatest defenses for cervical cancer. The Pap smear can detect cervical changes early before they turn into cancer. Check [cervical cancer screening](#) guidelines to find out how often you should have a Pap smear, or check with your doctor. Limit the amount of sexual partners you have. Studies have shown women who have many sexual partners increase their risk for cervical cancer. They also are increasing their risk of developing [HPV](#), a known cause for cervical cancer. Quit smoking or avoid secondhand smoke. Smoking cigarettes increases your risk of developing many cancers, including cervical cancer. Smoking combined with an HPV infection can actually accelerate cervical dysphasia.. Follow up on abnormal Pap smears. If you have had an [abnormal Pap smear](#), it is important to follow up with regular Pap smears or [colposcopies](#), whatever your doctor has decided for you. If you have been treated for cervical dysphasia, you still need to follow up with Pap smears or colostomies. Dysphasia can return and when undetected, can turn into cervical cancer. Get the HPV vaccine. If you are under 27, you may be eligible to receive the [HPV vaccine](#), which prevents high risk strains of HPV in women. The HPV vaccine, [Gardasil](#), was approved by the FDA to give to young girls as young as 9. The vaccine is most effective when given to young women before they become sexually actives.

Key word: pap smear test, HPV vaccine

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SEVEN QUALITIES OF HIGHLY EFFECTIVE TEACHERS

Dr. Madhu Gupta

Assistant Professor, Department of Botany,
College of Life Sciences, Gwalior (MP)

Teaching is a profession which requires a lot of patience, co-operation and understanding. There are various ways in which a person can become a good teacher. According to Linc. Fisch "SEVEN" has a magical property because universe was created in seven days and there are seven days in a week etc.

The seven qualities of highly effective teachers are as follows:

Highly effective teachers care

They care for their students, their work and their feelings. They do not have an insulting attitude towards the students that is they treat their students with dignity. Every student has a different need and this is well understood by the teacher.

Highly effective teacher share

They share their knowledge, insight and viewpoints with the students. They do not withhold information for their own personal gain. Sharing is way of life for them.

Highly effective teachers learn

They are always eager to learn new things and upgrade their knowledge. They love to discover new ideas and insights.

Highly effective teachers create

They firstly create an environment for the students to gain education effectively. Other than that they are willing to try the new and untested. They are not afraid of taking risks to create something new and interesting for the students to learn. They are not discouraged by occasional failure, but they use the experiences from the failure to attain betterment.

Highly effective teachers believe

They have very high confidence in themselves and also in their students. They are willing to grant their students freedom and responsibility to achieve the goal set for them.

Highly effective teachers dream

They have a vision for success. They give their students a goal to achieve and they give constant support and guidance to reach success.

Highly effective teachers enjoy

Teaching is not just a mode for earning for them. They enjoy their work. They gain special pleasure in teaching and spending time with their students. They have an environment of acceptance around them so that the students feel free to share their views

These qualities may not be sufficient to teach with excellence but are very important. Other than these, qualities like critical thinking, positive attitude, patience, and co-operation are also required to become an effective and ideal teacher.



ORGANIZING COMMITTEE



ORGANIZING COMMITTEE WITH VOLUNTEER



SECRETARIAL OFFICE

HPVCON-2013, College of Life Sciences, Cancer Hospital, Campus, Gwalior MP

Phone: 0751-2336502-5, Ext. 280, Fax: 0751-2336506, 08103150324

E-mail: vivek_micro2002@yahoo.co.in, hpvcon2013.cls@gmail.com www.collegeoflifesciences.org