

Govt. V.Y.T.PG. Autonomous College is dedicated to fostering excellence, innovation, and integrity in research. The college's **Research Policy** emphasizes collaborative projects and the protection of Intellectual Property Rights (IPR) among faculty and students.

### Key Research Achievements:

- **Five faculty members** received prestigious national and international fellowships for advanced studies.
- Grants totalling **₹45.99 lakhs** were secured from various organizations for research projects, endowments, and chairs.

### Research Involvement and Publications:

- **21 faculty members** are actively engaged in research projects.
- **55 teachers** serve as recognized research guides.
- **Two departments** have received funding for research projects from government and non-government agencies.
- **141 papers** published in CARE-indexed journals, **88 in Scopus**, and **89 in Web of Science**.
- The college's H-Index stands at **39**, with **117 citations each** in Scopus and Web of Science.

### Capacity Building and Collaboration:

- **49 workshops and seminars** were conducted on research methodology, IPR, and entrepreneurship.
- **56 MOUs** facilitated **29 collaborative activities**.
- **Four students** were awarded Ph.D. degrees, and **328 students** are currently pursuing doctoral programs.
- **College has a research ethics committee.**
- **Central Lab with many sophisticated instruments**

The college has established a RESEARCH COUNCIL that carries out the following responsibilities to ensure effective research implementation:

1. To secure research projects from international/national agencies as well as utilize college resources.
2. To promote research activities through scientific meetings, collaborations, networking, and providing support, including seed funding.
3. To publish a bi-annual peer-reviewed multidisciplinary journal, titled *Research Expression*, as a platform for research dissemination.
4. To facilitate national and international fellowships for students and faculty members.
5. To establish collaborations with national and international organizations and industries through Memorandums of Understanding (MoUs).
6. To organize short-term, project-based research opportunities for undergraduate and postgraduate students.
7. To assist Ph.D. scholars with resources such as instrumentation, intellectual support, and library facilities, as well as opportunities for participation in national and international scientific events.
8. To conduct research addressing both prominent local societal issues and broader global challenges.

The Research Council is also tasked with reviewing and updating research policies and guidelines to ensure proper conduct, adopting

### INNOVATION ECOSYSTEM

The college has an ecosystem for innovation based activities viz.-

1. Academic innovation,
2. Entrepreneurship based innovation,
3. Natural Resource based innovation, etc.

## **Academic and Entrepreneurship Innovations**

In the realm of academic innovation, our college has successfully synthesized various types of nanoparticles and established their practical applications. Additionally, several pharmaceutically significant compounds have been extracted from native plants found in our state.

As part of our entrepreneurship initiatives, we have developed a unique formula for manufacturing fly ash-based bricks using biological residues. This innovation has led to a notable success story, where one of our students established a thriving brick manufacturing industry in Siltara, Raipur. Furthermore, we are actively working on developing processes for producing polylactic acid-based bioplastics.

Our skill-oriented, entrepreneurship-focused programs include a Mushroom Cultivation Program, Vermicomposting Training Program, and Fish Culture Training Program, which equip participants with valuable expertise.

## **Knowledge Creation, Transfer, and Support**

To foster innovation and skill development, we have established several incubation centers, including:

- Mushroom Cultivation Training Center
- Vermicomposting Unit
- Fish Culture Training Center
- Sickle Cell Anemia Screening and Support Cell
- Medicinal Plants Consortium Cell
- Genomic Analysis Cell

These centers provide training and services to students and community members, empowering them to create entrepreneurial ventures and deliver valuable services.

Our specialized Medicinal Plants Consortium focuses on identifying, characterizing, and detecting lead compounds from medicinal plants for drug development and therapeutic applications.

Additionally, we conduct various community-oriented programs addressing issues such as Sickle Cell Anemia, Glucose-6-Phosphate Dehydrogenase deficiency, sexually transmitted diseases (STDs), and hygiene awareness, contributing to societal well-being.