

## Research:

### 1. List of Research Projects: Completed& Ongoing:

| Sr. No. | Title of the Project | Name of PI/<br>Major Advisor/<br>Research<br>Worker | Funding<br>Agency | Total Cost of<br>the project (Rs<br>in Lakh) | Extra-mural<br>(Funding<br>agency)/<br>Intra-mural | Status<br><br>(Comple<br>ted/On<br>going) | Duration |
|---------|----------------------|---|-------------------|--|--|---|----------|
|---------|----------------------|---|-------------------|--|--|---|----------|

### 2. List of Private Agency Projects: Nil

| Sr. No. | Title of the Project | Name of PI/<br>Major<br>Advisor/<br>Research<br>Worker | Funding<br>Agency | Total Cost of<br>the project (Rs<br>in Lakh) | Extra-mural<br>(Funding<br>agency)/ Intra-<br>mural | Status<br><br>(Comple<br>ted/Ongoi<br>ng) | Duration |
|---------|----------------------|--|-------------------|--|---|---|----------|
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### 3. Research Priorities:

| Sr. No. | Research Area  | Aim   | Objective   | Benefits of<br>Farmers  |
|---------|--|---|---|---|
| 1       | Application of edible films and coatings for enhancement of quality and shelf-life of livestock products | To improve the quality and shelf-life of livestock products using edible films and coatings | 1. To improve the quality and shelf life of livestock products using natural methods of preservation. | 1. Quality and shelf-life will be improved.<br><br>2. Enhanced income generation as the product will be stable for longer duration of time. |

#### 4. Thesis:

Master:

| Name of Department : |                     |   |                    |                     |
|----------------------|---------------------|---|--------------------|---------------------|
| Sr. No.              | Name of the Student | Title of Thesis   | Year of Completion | Name of the Advisor |
| 1                    | ZanzadSuhasini      | “Studies on standardization on emu meat emulsion and cooked emu meat sausages.” | 2010               | Dr.R.D.Kokane       |
| 2                    | Saeed Maner         | Development of process for cooked emu meat patties.”                            | 2010               | Dr.R.D.Kokane       |
| 3                    | Sumin Jose          | “Process deveopment for dehydrated flavoured chicken shreds from spent hen meat | 2012               | Dr.R.D.Kokane       |
| 4                    | Kavita Patil        | Studies on development of shelf stable noodles from spent hen meat.”            | 2012               | Dr.R.D.Kokane       |
| 5                    | Anil Dange          | “Studies on development of low sodium chicken strips.”                          | 2013               | Dr.R.D.Kokane       |
| 6                    | Mr. Sarvadnya       | Development of hot extruded puffed products from spent hen meat.”               | 2013               | Dr.R.D.Kokane       |
| 7                    | Ms. Vanramhlimpui   | “Studies on Process Standardization of Chicken Momo.”                           | 2015               | Dr. S. V. Londhe    |

|    |                    |   |      |                  |
|----|--------------------|---|------|------------------|
| 8  | Santosh Virkar     | “Effect of freeze thaw cycle on quality of chicken.”  | 2015 | Dr. S. V. Londhe |
| 9  | S. R. Yadav        | “Assessment of quality of chicken nuggets treated with garlic extract at refrigerated storage.”                   | 2016 | Dr. S. R. Badhe  |
| 10 | T. P. wanjari      | “Assessment of storage stability of garlic extract treated paneer at refrigeration temperature.”                  | 2016 | Dr. S. R. Badhe  |
| 11 | DhansahreeDidolkar | “Development of intelligent packaging indicator for monitoring chicken meat quality during refrigerated storage.” | 2017 | Dr. S. R. Badhe  |
| 12 | Poonam Pawar       | Process optimization of fruit yoghurt enriched with dietary fibre   | 2019 | Dr. S. R. Badhe  |
| 13 | Saurabh Karumamay  | Extending the shelf life of paneer coated in edible film treated with essential oils                              | 2019 | Dr. S. R. Badhe  |
| 14 | VishwaJeet Yadav   | Development of edible film incorporated with beet root extract and its  | 2021 | Dr. V. H. Shukla |

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|----|----------------------------|--|------|------------------|
|    |                            | effects on quality of chicken patties  |      |                  |
| 15 | TusharGovindEthape         | Development of edible film incorporated with red cabbage extract and its effects on quality of chicken sausage           | 2021 | Dr. V. H. Shukla |
| 16 | Eshwari Sonar              | Quality assessment of chitosan and oregano essential oil nanoparticles coated chicken patties                            | 2022 | Dr. V. H. Shukla |
| 17 | Shreya Rao                 | Quality assessment of chitosan and cinnamon essential oil nanoparticles coated chicken sausages                          | 2022 | Dr. V. H. Shukla |
| 18 | Akash Sakalkar<br>Madhukar | Characterization of Dang Cow Milk and Development of Fruit Paneer  | 2023 | Dr. V. H. Shukla |
| 19 | Srijna sharma              | Quality assessment of paneer coated with Nanoemulsion of essential oils and Carboxymethylcellulose                       | 2023 | Dr. V. H. Shukla |
| 20 | Prashant Fuke              | Development of composite film incorporated with black pepper essential oil and its effects on quality of chicken patties | 2024 | Dr. V. H. Shukla |

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|----|---------------------|---|------|------------------|
| 21 | Thouti Nitish Kumar | Development of composite film incorporated with thyme essential oil and its effects on quality of chicken patties | 2024 | Dr. V. H. Shukla |
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Doctoral: Nil

| Name of Department: |                     |                 |                    |                     |
|---------------------|---------------------|-----------------|--------------------|---------------------|
| Sr. No.             | Name of the Student | Title of Thesis | Year of Completion | Name of the Advisor |

5. Research Papers Published:

List of Research Publications:

| Sr. No. | Authors                                  | Year | Title of the Research Paper  | Name of the Journal            | Volume; Page Nos. | NAAS Rating, if any |
|---------|--|------|--|--------------------------------|-------------------|---------------------|
| 1       | Vivek Shukla, Kandeepan G, Vishnuraj M.R | 2015 | Development of On-Package Indicator Sensor for Real-Time Monitoring of Buffalo Meat Quality During Refrigeration Storage | <i>Food Analytical Methods</i> | 8: 1591-1597      | 8.6                 |

|   |  |      |   |   |  |      |
|---|--|------|---|---|--|------|
| 2 | Vivek Shukla, Sanjod Kumar Mendiratta, Ravindra Jayavant Zende, Ravi Kant Agrawal, Rohit Kumar Jaiswal | 2020 | Effects of chitosan coating enriched with <i>Syzygium aromaticum</i> essential oil on quality and shelf-life of chicken patties | <i>Journal of Food Processing Preservation.</i> | doi.org/10.1111/jfpp.14870                       | 8.0  |
| 3 | D.A. Didolkar, S.R. Badhe, V.H. Shukla and S.R. Yadav.   | 2018 | Development of Bromocresol Purple Based Indicator Sensor for Monitoring Broiler Meat Quality Under Refrigerated Storage         | <i>The Indian Veterinary Journal,</i>           | 95 (08) : 70 - 73                                | 4.99 |
| 4 | Trupti P. Wanjari, Shekhar R. Badhe, Vivek Shukla, Satish R. Yadav and Vilas M. Vaidya.                | 2019 | Evaluation of Garlic Extract in Extending Shelf Life of Paneer  | International Journal of Livestock Research,    | 9(7):100-110.<br>doi:10.5455/ijlr.20190311110441 | 4.31 |
| 5 | Eshwari Sonar, V. H. Shukla, V. M. Vaidya, R. J. Zende, S. D. Ingole.                                  | 2023 | Nanoparticles of chitosan and oregano essential oil: application as edible coatings on  | Journal of Food Science and Technology          | doi.org/10.1007/s13197-023-05804-1               | 8.6  |

|  |   |      |   |  |                |      |
|--|---|------|---|--|----------------|------|
|  |   |      | chicken patties.  |  |                |      |
|  | S. R. Yadav, S. R. Badhe, Vivek Shukla, Trupti P. Wanjari and D.A. Kakkar.                    | 2020 | Shelf-Life Extension Of Chicken Nuggets Incorporated With Garlic Extracts.  | Journal of Bombay Veterinary College,    | 25(2): 76-72.  | ---  |
|  | Saurabh Karunamay ,Shekhar R. Badhe, Vivek Shukla, Nikita Singh, Kasturi Lali and Smita Patil | 2020 | Application of Clove Essential Oil in Food Industry - A Review.   | Journal of Food Research and Technology, | 07 (04) 23-25. | ---- |
|  | Saurabh Karunamay ,Shekhar R. Badhe, Vivek Shukla and Poonam A. Pawar                         | 2019 | . Effect of Edible Packaging Film Treated with Admixture of Clove and Oregano Essential Oil in Extending the Shelf Life of Paneer | Journal of Food Research and Technology, | 08 (01) 01-04. | ---- |
|  | Saurabh Karunamay, S. R. Badhe and Vivek Shukla   | 2020 | Comparative study of essential oil of clove and oregano treated edible film in extending  | The Pharma Innovation Journal            | 9(7): 312-316  | ---  |

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|--|---|------|---|--|-----------------|------|
|  |   |      | shelf life of paneer  |  |                 |      |
|  | Saurabh Karunamay, S. R. Badhe and Vivek Shukla | 2020 | Effect of Edible Packaging Film Treated with Essential Oil of Clove in Extending the Shelf Life of Paneer | International Journal of Livestock Research. | 10 (9): 178-183 | 4.31 |

List of Marathi and Popular articles published:

| Sr. No | Authors  | Year | Title  | Name of the Journal/Magazine | Volume: Page Nos. |
|--------|--|------|--|------------------------------|-------------------|
| 1      | Vivek Shukla and Satish Yadav                  | 2017 | तापमानाचा वापर करून चिकन मधील जंतुसंसर्गास अटकाव | Agrowon                      | 13/09/2017        |
| 2      | Satish Yadav, Narendra Karembele, Vivek Shukla | 2017 | अनुवांशिक आजार                                   | Agrowon                      | 26/10/2015        |
| 3      | Satish Yadav                                   | 2017 | प्रक्रिया करून टिकवा अंड्यांची गुणवत्ता          | Agrowon                      | 12/09/2017        |

## 6. Research Recommendations

|               |   |
|---------------|---|
| Sr. No.       | 1   |
| Year          | 2023  |
| Project Title | Quality assessment of chitosan and cinnamon essential Oil nanoparticles coated chicken sausages |
| Investigators | Neelagiri Shreya Rao, V. H. Shukla, R.J. Zende, S. D. Ingole, Dr. D.                            |



|                 |   |
|-----------------|---|
|                 | N. Desai, Dr. R. R. Pharande  |
| Recommendations | Edible coating of nanoemulsions of 0.3% chitosan incorporated with 0.3% cinnamon essential oil could be successfully used to enhance the quality and shelf-life of chicken sausages by 15 days than control at refrigeration temperature. |

#### 7. MOU signed by the Colleges

| Sr. No. | MOUS Between           | Date of signing | Place | Duration |
|---------|------------------------|-----------------|-------|----------|
|         | Party – 1 & Party - II |                 |       |          |
|         |                        |                 |       |          |
|         |                        |                 |       |          |

#### 8. Research Priorities / Thematic areas: Department Wise

1. Edible films and coatings for enhancement of quality and shelf life of meat and milk products
2. Development of shelf stable milk and meat products
3. Development of value added milk and meat products

#### 9. Significant Research Achievement:

| Sr. No. | Achievements       | Description |
|---------|--------------------|-------------|
| 1       | Patents Awarded    |             |
| 2       | Breed Registration |             |
| 3       | IPR                |             |
| 4       | Copyright          |             |
| 5       | Trademark          |             |