

Seed grant under RUSA 2.0

( Detail of utilization)

NAME:Dr.SarbjeeetKour

DEPARTMENT :Zoology

PROJECT ENTITLED :Biochemical estimation of rotifers of family Brachionidae

S.no	Item	Amount sanctioned	Expenditure incurred	Balance
1	Consumables (chemicals. Glassware etc. )	80,000	78,946	1,054
2	Travel	10,000	10,000	nil
3	Contingency	10,000	9915	85
4	<b>Total</b>	<b>1,00,000</b>	<b>98,861</b>	<b>2139</b>

*Sarbjeeet Kour*  
(PI)

## PROJECT REPORT

### TITLE: BIOCHEMICAL ESTIMATION OF ROTIFERS OF FAMILY BRACHIONIDAE

Water bodies apart from providing some important resources for human existence, form habitat for a remarkably rich biota. One of the important representatives of this speciose biota are the plankton. Plankton are minute organisms that wander in water at the mercy of winds, currents and tides. Qualitative and quantitative analysis of plankton provide an important indication of the eutrophic status of the water bodies.

Depending on their nature, they form two groups; Phytoplankton and Zooplankton.

Phytoplankton includes photoautotrophic microorganisms that form an important component of aquatic food chain. Zooplankton includes the microscopic free swimming animal component of aquatic environment that feed on phytoplankton and are represented by Protozoa, Rotifera, Cladocera, Copepods and Ostracods. They constitute an important link between primary producers and consumers of higher order in any water body.

Any variation in abiotic parameters highly influence the distribution, structure and abundance of these zooplankton, significantly of Rotifers. This group also acts as food for fish larvae. Rotifers having small size, high multiplication rate and slow mobility act as a suitable organism for being cultured as a live feed. As the nutritional value of rotifers depends on the feed provided, in the present study biochemical composition of rotifers was analyzed. Members of *Brachionidae* family were cultured in-vitro on different diets and change in biochemical composition and feed assimilation rate was assessed. For this purpose following lentic water bodies of Jammu have been visited: Gharana wetland (R.S.Pura region), Kanjak di chhapardi (Bisnah region), Peerni da talaab, Budhi pond and Uttri pond (kathua region), Mandli pond and Baddu ponds (Billawar region)

8 species of genus *Brachionus* viz: *Brachionus calyciflorus*, *Brachionus caudatus*, *Brachionus rubens*, *Brachionus angularis*, *Brachionus quadridentata*, *Brachionus bidentata*, *Brachionus falcatus*, *Brachionus forficula* were recorded. To achieve pure culture of a *Brachionus* species, *Brachionus calyciflorus* was selected and segregated from the mixed population of zooplankton sample. A small scale culture was started by adding about 2 rotifers per ml to the culture vessels. 5 liter circular glass troughs were taken for this purpose. Rotifers were fed with two different feeds viz. powdered *Chlorella* and Baker's yeast. At the time of harvesting, the population reached upto 35-40 rotifers per ml. As a result of experiments, comparatively better results with powdered *Chlorella* than Baker's yeast were obtained. Proximate composition was analyzed and it was recorded that unenriched rotifers contained 41, 43, 45% proteins which was reduced by 1-3% upon enrichment.