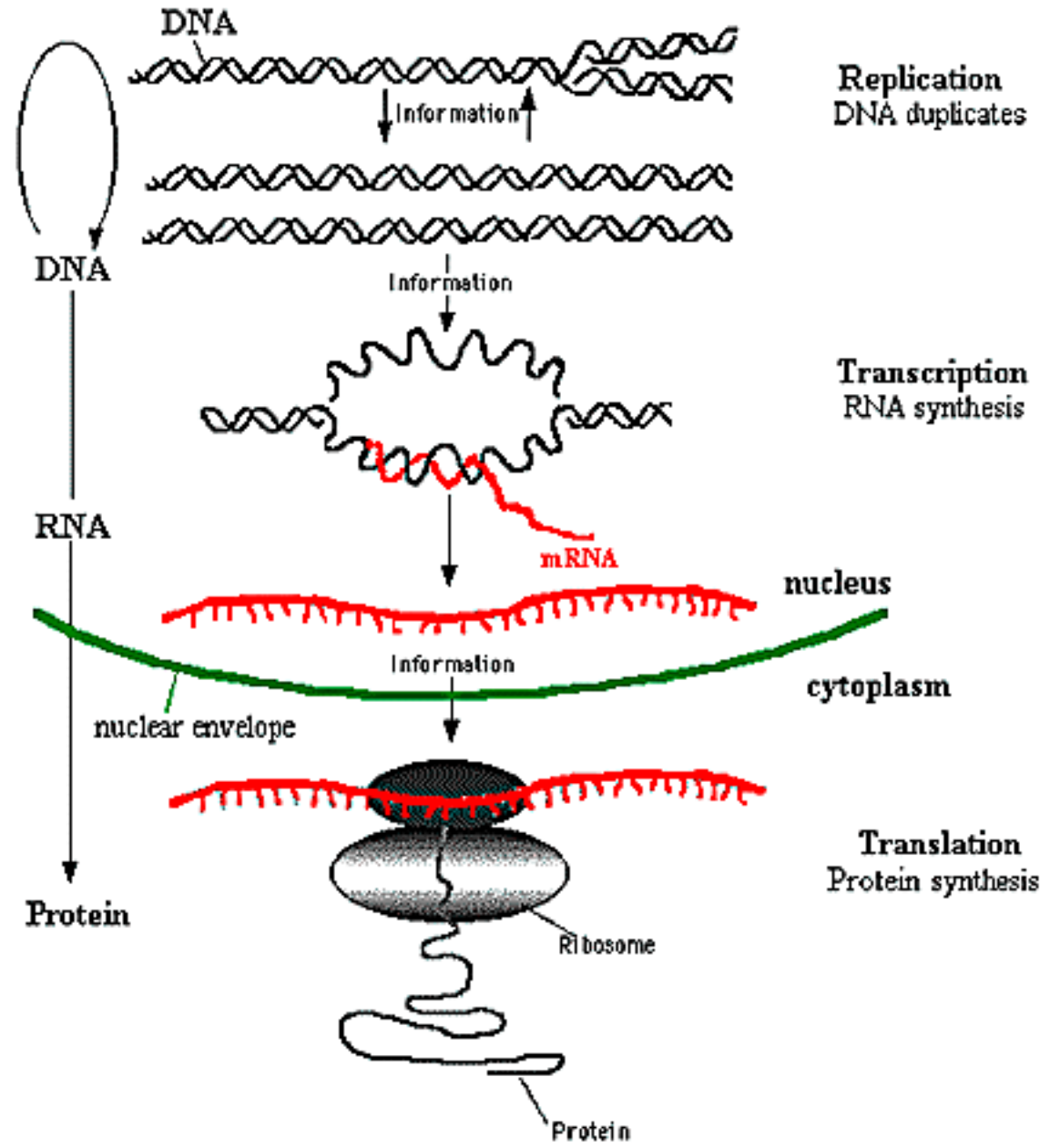


Analysis and Management of Microarray Data

- Previous Workshops
 - Computer Aided Drug Design
 - Public Domain Resources in Biology
 - Application of Computer and Internet in Bioinformatics
 - National Workshop on Genomics and Proteomics
 - Computer Aided Vaccine Design
- Training Program
 - On demand for Individuals
 - South Korea
 - DOEACC (RCC Chandigarh)

(RT)

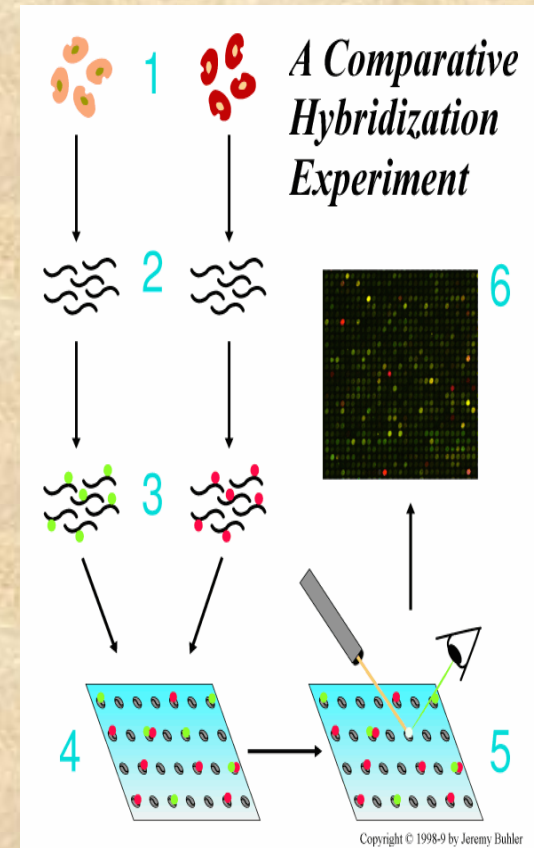


The Central Dogma of Molecular Biology

Analysis and Management of Microarray Data

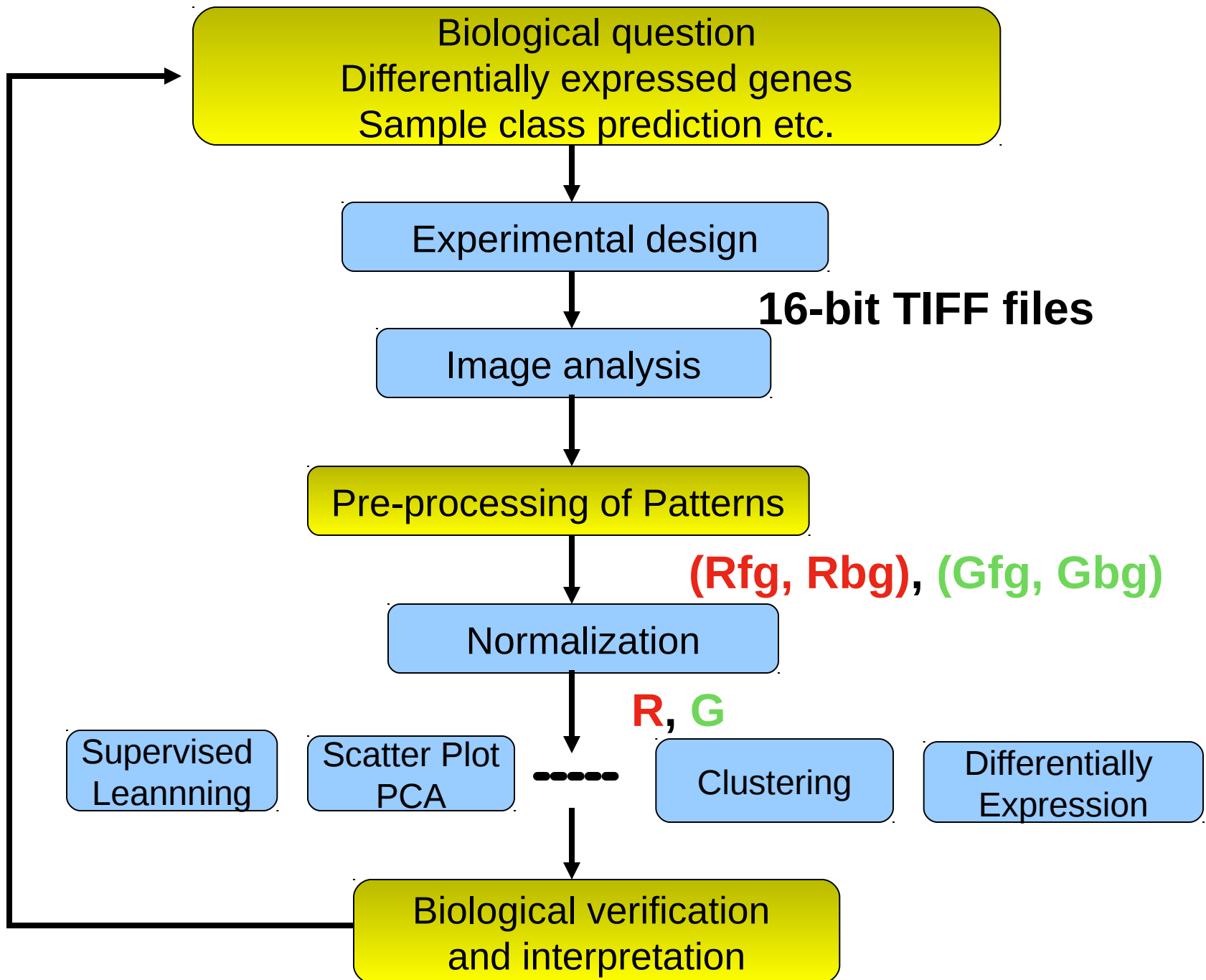
Major Applications

- ✓ Identification of differentially expressed genes in diseased tissues (in presence of drug)
- ✓ Classification of differentially expressed (genes) or clustering/ grouping of genes having similar behaviour in different conditions
- ✓ Use expression profile of known disease to diagnosis and classify of unknown genes



Analysis and Management of Microarray Data

- Magnitude of Data
 - Experiments
 - 50 000 genes in human
 - 320 cell types
 - 2000 compounds
 - 3 times points
 - 2 concentrations
 - 2 replicates
 - Data Volume
 - 4×10^{11} data-points
 - $10^{15} = 1$ petaB of Data



Programme

- Fundamentals of Microarray (K Ganesan)
- Issues in Microarray (Anand K. Bachawat)
- Introduction to Statistics (Balvinder Singh)
- Statistics using R via Web (G P S Raghava)
- Analysis of Microarray Data (G P S Raghava)
- Management of Data locally (G P S Raghava)
- Database in Molecular Biology (Balvinder Singh)
- Repository of Microarray data world-wide (G P S Raghava)