HR COMPENSATION
Career Ladders

UAB
The University of
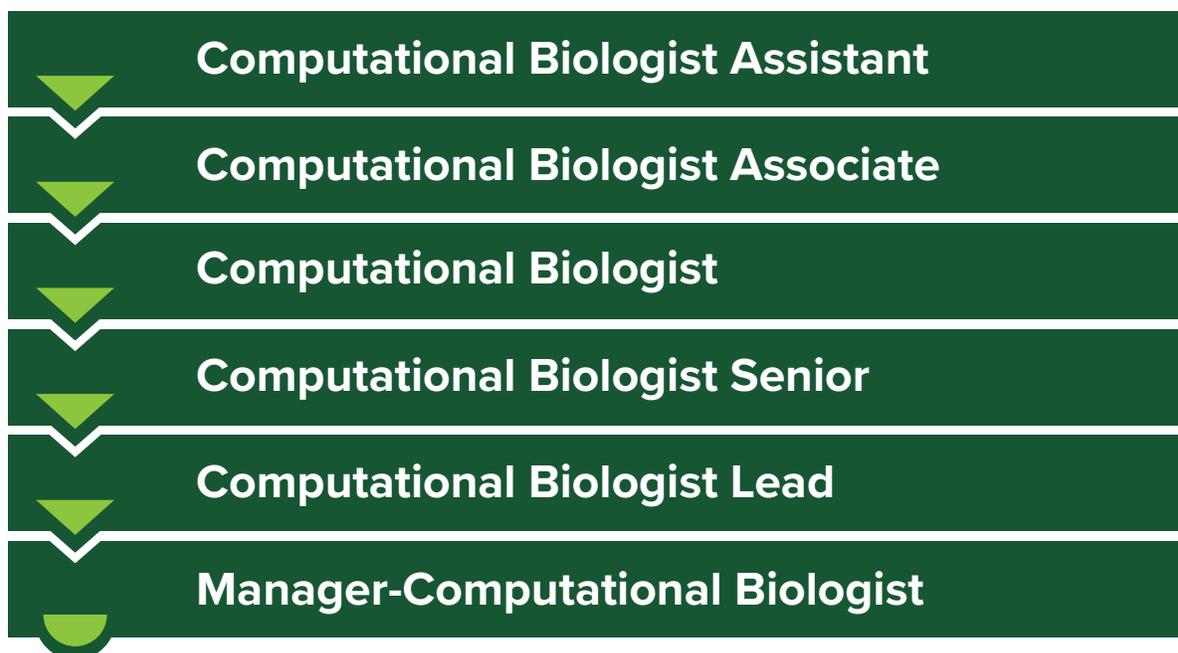**Alabama at Birmingham.**

Human Resources

Computational Biologist Career Ladder

The Computational Biologist Career Ladder provides a structured pathway for professionals aiming to excel in computational biology, enabling growth from entry-level roles to strategic leadership positions. Beginning as a Computational Biologist Assistant, individuals support research teams by processing experimental data, assisting in pipeline development, and contributing to software and platform-based tools for biomedical research. Advancing to a Computational Biologist Associate, professionals manage data pipelines, implement novel tools, and contribute to experimental design and visualization for biological insights. The Computational Biologist role offers opportunities for independent contributions, including developing scalable pipelines, analyzing high-throughput datasets, and producing publication-ready outputs, while actively collaborating on research projects. As a Computational Biologist Senior, individuals lead complex analyses, develop novel frameworks, and mentor junior team members, ensuring rigorous and reproducible approaches to bioinformatics challenges. The Computational Biologist Lead oversees comprehensive study designs, analysis plans, and project management, leading methodological innovations and mentoring staff in cutting-edge research techniques. Finally, the Manager-Computational Biology role emphasizes team leadership, strategic partnerships, grant support, and the development of advanced computational methods that influence research direction and outcomes. This career ladder fosters technical excellence and leadership growth in the rapidly evolving field of computational biology.

Computational Biologist Assistant

Computational Biologist Associate

Computational Biologist

Computational Biologist Senior

Computational Biologist Lead

Manager-Computational Biologist

Click on a job title above for additional information.

Computational Biologist Assistant

Under the supervision of more senior computational biologists, processes experimental data and helps define the parameters for data modeling. Supports research investigators in the mission to perform high impact, biomedical or biological research, building and leveraging platform-based tools and biological understanding. Analyzes omics data or high-throughput data to support cutting edge research across a variety of biological or medical domains. Supports the research team in data processing, data analysis and software development while working with clients and investigative teams. Maintains and assists in developing tools and pipelines in support of investigators. Supports experienced researchers in applying data science skills to biomedical science and cutting-edge bioinformatics research. May assist software and/or platform development teams in disseminating documentation and providing user support enabling other computational researchers and bioinformaticians. May supervise students.

EDUCATION/ EXPERIENCE:	Bachelor's degree in a related field required. Work experience may NOT substitute for education requirement.
GRADE:	W.G380
FLSA STATUS:	Exempt
REMOTE/HYBRID:	Eligible
CAREER LEVEL:	Individual Contributor

Computational Biologist Associate

Uses existing tools to build data processing pipelines to convert raw data into formats compatible with conventional statistical and bioinformatics analysis and visualization. Evaluates new technologies and methods for implementation of novel tools when necessary. Performs routine analysis for which established tools exist and are considered reliable. Keeps up with the computational biology literature and computational method development to assure pipeline components are up to date. Under the supervision of a senior computational biologist, aids in the development of pipelines following best computational biology practices (e.g: use a workflow management system) to deploy pipelines in a rigorous, scalable, and reproducible manner. Monitors, downloads, organizes, and manages data from public data repositories or generated by collaborates. Develops and deploy web-applications for the interactive visualization of high-throughput data to aid in data interpretation. Helps to formulate specific aims, provides feedback for experimental design, and develops data analysis plans and statements of work . Develops timelines and components for larger projects; masters multi-tasking so that complex projects involving many interdisciplinary individuals move forward smoothly.

EDUCATION/ EXPERIENCE:	Master's degree in a related field OR Bachelor's degree in related field and two (2) years of related experience. Work experience may NOT substitute for education requirement.
GRADE:	W.G390
FLSA STATUS:	Exempt
REMOTE/HYBRID:	Eligible
CAREER LEVEL:	Individual Contributor

Computational Biologist

Analyzes genomic, transcriptomics, epigenomics, proteomics and other molecular datasets (including single-cell and spatial transcriptomics datasets) in relation to biomedical or biological research. Obtains and pre-processes data from external resources such as public repositories. Assists in the design and implementation of analysis plans to address scientific objectives. Collaborates with others in developing and implementing research projects. Develops pipelines following best computational biology practices (e.g: use a workflow management system) to deploy pipelines in a rigorous, scalable, and reproducible manner. Develops novel data analysis pipelines and workflows to address cutting edge research needs . Performs code review, analysis review, and writes summary reports to collaborators. Prepares figures for publication and helps to write manuscripts. Assists with documenting code and prepares grant progress reports. Presents results internally and to collaborators and other groups. Develops training material.

EDUCATION/ EXPERIENCE:	Doctorate degree in a related field OR Master's degree in a related field and two (2) years of related experience OR Bachelor's degree in related field and four (4) years of related experience required. Work experience may NOT substitute for education requirement.
GRADE:	W.G400
FLSA STATUS:	Exempt
REMOTE/HYBRID:	Eligible
CAREER LEVEL:	Individual Contributor

Computational Biologist Senior

Analyzes data generated from a variety of sequencing applications that interrogate a broad range of gene regulation and molecular mechanisms across a variety of biological domains. Collaboratively develop novel tools and frameworks to analyze high-throughput sequencing (-omics) data. Build novel analytical software pipelines to find answers to biological questions about gene regulation in genome-wide datasets, usually from applied sequencing experiments like whole genome and exome sequencing, RNA-Seq, ATAC-seq, Hi-ChIP, single-cell sequencing and spatial transcriptomics. Leads the development of pipelines following best computational biology practices (e.g: use a workflow management system) to deploy pipelines in a rigorous, scalable, and reproducible manner. Leads meetings with collaborators and presents project updates. Generates publication ready figures, writes manuscripts, and statements of work. Provides feedback and support to project design and execution. Trains more junior colleagues in the analysis and pipeline deployment following established best practices. Maintains documentation and standard practices of operation up to date and develops training material.

EDUCATION/ EXPERIENCE:	Doctorate degree in a related field and four (4) years of related experience OR Master's degree in a related field and six (6) years of related experience OR Bachelor's degree in related field and eight (8) years of related experience required. Work experience may NOT substitute for education requirement.
GRADE:	W.G415
FLSA STATUS:	Exempt
REMOTE/HYBRID:	Eligible
CAREER LEVEL:	Individual Contributor

Computational Biologist Lead

Takes the computational biology lead on studies including designing the study, the analysis plan, and carrying out the statistical programming and data management to implement the plan. Takes the lead on project management from writing initial plans and timelines, to the execution of the bioinformatics analysis which meets the milestones and deliverables. Oversees junior-level staff members on data cleaning, data management, analysis, creation of analytic files, and mentors staff members in the area of conducting collaborative research. Leads methodological projects related to collaborations on topics including the evaluation of software or methods as well as the development of novel methods, as need arises within collaborative projects. Meets one-on-one with the collaborator to gain background on the study and the research questions and helps to refine the questions and formulate the hypotheses. Extracts necessary information to design the study with optimal operating characteristics and develops a sound analysis plan. Develops or adapts standard practices of operation to sustain novel projects or cutting-edge research needs.

EDUCATION/ EXPERIENCE:	Doctorate degree in a related field and four (4) years of related experience OR Master's degree in a related field and six (6) years of related experience required. Work experience may NOT substitute for education requirement.
GRADE:	W.G420
FLSA STATUS:	Exempt
REMOTE/HYBRID:	Eligible
CAREER LEVEL:	Emerging Leader

Manager-Computational Biology

To manage a team of computational biologists including hiring, training, and mentoring staff members. To assign responsibilities to team members. To serve as a strategic partner on research committees and task forces. To create scientifically rigorous visualizations, communications, and presentations of data findings to investigators, leadership, and other stakeholders . To contribute to the generation of protocols, publications, and intellectual property. To develop and apply innovative sophisticated computational methods, tools, and pipelines for data analysis, quality and control, and validation. To meet with investigators to draft budget justifications, aid in project design, and review of grants. To provide domain specific methodology to grant applications. May serve as Principal Investigator or Co-Investigator on proposals.

EDUCATION/ EXPERIENCE:	Doctorate degree in a related field and seven (7) years of related experience OR Master's degree in a related field and nine (9) years of related experience required. Work experience may NOT substitute for education requirement..
GRADE:	W.G440
FLSA STATUS:	Exempt
REMOTE/HYBRID:	Eligible
CAREER LEVEL:	Functional Manager