NRRI Research Group Director
Assoc Depart Director, 9338
Position Number 286051

Background:
The Natural Resources Research Institute (NRRI) at the University of Minnesota Duluth is an applied research organization whose charter is "to foster the development of Minnesota's natural resources in an environmentally sound manner to promote private sector employment". As a key asset to the University of Minnesota system, NRRI engages in collaborative, applied research to deliver excellence in science, engineering and economic analysis in support of natural resource use and management decisions.

Position Description:
This position will report to one of two NRRI Technical Directors and will develop and lead an Institute research group focused on responsible, high-value utilization of woody biomass resources. Specifically, the group is charged with providing assistance to industries utilizing forest products (lumber production, window/door manufacture, millwork, specialty products, etc.), development of modified wood and other higher value materials from Minnesota biomass, refocus of the existing biomass extraction program and development of a new focus to develop and demonstrate entrepreneurial chemical or biochemical technologies to generate higher value fuels, chemicals and/or materials from woody biomass. The position will also have a principal investigator role associated with the latter focus area.

The position will be located at the Duluth Miller Trunk Highway facility. Regional travel will be required. The position will engage and work closely with NRRI research, information, and financial managers, NRRI researchers, University of Minnesota departments and personnel, regional universities, public and private sector groups, legislatures, governmental agencies, industry and business communities. The position will have both direct and indirect supervisory responsibilities.

Job Duties:
Specific duties will be listed under the following descriptive functional headings.

Research Group Director
a. Develop a coherent woody biomass utilization research group that engages colleagues from across the Institute that is mission-driven and consistently funded
b. Build collaborative alliances – internal (NRRI, UMD, UMN) and external (academic, government, industry) - to pursue research and development leading to commercial development of new, sustainable forest products
c. Lead research group in identifying and pursuing funding sources in concert with NRRI and University resources
d. Identify required science and engineering skill sets and develop succession plan to replace retiring personnel and allow group to evolve into an enhanced research program
e. Identify strategic laboratory and analysis infrastructure supporting biomass research and funding approaches to support program and Institute growth
f. Identify strategic laboratory certifications and collaborate in efforts to obtain and maintain certification

Principal Investigator
a. Develop, evaluate and demonstrate biomass pretreatment and conditioning techniques that allow more effective use of biomass in subsequent processing or conversion technologies
b. Develop world-class, funded research program in biomass utilization via physical, chemical, biochemical or other processing for production of higher value products (fuels, chemicals, materials)
c. Work with emerging bio-economy industry to develop technologies leading to new market opportunities
d. Develop key relationships with regional partners to introduce technologies for commercialization
Operational Role

Group director role organizes research group programs and deliverables consistent with Institute mission and goals. Group director will engage with Institute senior leadership to influence direction and operation of Institute. Role will also be responsible for long-term assembly and development of research group. Group director will coordinate and assure quality of both written and oral communications of research teams. Group director is responsible for group safety performance and compliance with state and federal safety regulations. Group director will also lead laboratories to obtain certifications as needed.

Scope of Measurable Impact

Key short-term measurable impact will be formation of a coherent wood utilization research group with suitable, consistent funding. Longer-term impacts include academic, industrial and public recognition of NRRI wood utilization programs, consistent delivery of results within budget and timeline and attraction of key internal and external collaborators.

Independence and Decision-Making

Group director primarily works independently in accordance with agreed-upon objectives; generally responsible for keeping processes moving in a productive direction, and will look for supervisory approvals when changes to process steps are considered and when additional resources for task completion are required.

Complexity and Problem Solving

The director will need to have demonstrated sufficient intellectual breadth, flexibility and creativity to incorporate multiple perspectives from industrial, regulatory, governmental and academic sources, to adapt research programs to the needs of society and to incorporate future technology advances.

Supervision

Has the authority to hire, transfer, promote, discharge, suspend, assign work, reward, discipline, and direct the work of both full-time and part-time University employees.

Required Qualifications

- PhD (science, engineering or related) with at least 10 years of industrial/academic research experience
- Established and demonstrated presence in the field of biochemical processing, specifically related to woody biomass and similar feedstocks
- Experience in entrepreneurial commercialization of new technologies
- Detail-oriented, self-motivated and possessing strong organizational skills
- Demonstrated ability to apply sound judgment in strategic decisions on the basis of organizational mission and input from peers and organizational leaders
- Excellent interpersonal skills; demonstrated ability to lead by influence and position, contribute as leader and/or collaborator; able to build networks and multidisciplinary team relationships
- Excellent written communication skills; demonstrated skills in technical writing, editing and organization of data
- Demonstrated ability to lead strategic thinking
- Demonstrated ability to lead complex research efforts, execute versus research program objectives, write reports, train, mentor and manage direct reports and manage project budgets
- Demonstrated record of identifying, writing and winning federal, state and industry grants and contracts

Preferred Qualifications

- MBA or related training in business, entrepreneurship
- Experience in entrepreneurial business startup and/or leading SBIR/STTR-funded research programs
- Ten years’ experience in industry and/or business or experience in management of independent research unit(s) within a university setting
- Experience in life cycle analysis of products and/or processes
- Demonstrated experience with intellectual property development, management and technology transfer
- Demonstration of clear verbal communication skills in the English language