

City of London - Application for Appointment to City of London Community Advisory Committees

Application

Committee you are interested in serving on: **Ecological Community Advisory Committee**

If applying for the Accessibility Community Advisory Committee, please select: **No, I am not an applicant with a disability.**

If applying for the Ecological Community Advisory Committee, a professional designation, education or experience in related fields is a requirement based on the technical nature of the committee work. Please indicate your area(s) of expertise: **Biology; Botany; Ecology**

If you selected 'Other', please specify:

Contact Information

Name: **Suba Sivakumar**

City: **London**

Province: **ON**

Postal Code: **N5X 3V2**

Experience and Qualifications

If you have experience on a London Advisory Committee, please provide dates and details. (max. 250 characters): **Member At Large (EEPAC)
Environmental and Ecological Planning Committee, City of London
Mar 2017 - Present**

What do you hope to contribute or learn as part of a Community Advisory Committee? (max. 250 characters): **I would like to review projects that may impact environment/ecology in London, ON and provide technical advice to the City of London on matters which are relevant to the City of London's Official Plan, including London's natural heritage systems it relates to environmentally Significant Areas, woodlands, stream corridors, etc.**

How will you support the work of a Community Advisory Committee? (max. 250 characters): **Review project proposals, reports, EIS . Be a active member in diverse working groups.**

Please describe additional experience, training, or community involvement that will help you in your role as a Community Advisory Committee Member. (max. 250 characters): **Education
Michigan State University
PhD, Plant Pathology
2002 - 2006**

Attach resume or other document here, if needed: **CV-Suba Sivakumar.pdf**

Confirmations

I declare the following: **I am a resident of London. ; I am at least 18 years old.; I am not a City employee or Council member.; I understand that the commitment may be up to 4 hours per month to attend meetings and prepare.; I understand that my application and any attachments will be included on a public agenda that is published on the City website.**

To help inform our outreach activities, please tell us how you heard about this opportunity: (optional): **Other**

If you selected 'Other', please specify: **EEPAC meeting**

Submitted on: **4/2/2022 4:53:10 PM**

PROFESSIONAL HISTORY

President and Chief Executive Officer November 2016-Present,
Van Luyk Greenhouses and Garden Centre London, ON.

Leading greenhouse garden centre operation in a holistic approach to produce high quality crops while protecting the environment, improving efficiency, promoting R & D and outreach.

- Accomplished operation efficiency, improved crop quality & reduced labour costs
- Implemented integrated pest management and ceased using synthetic chemical pesticides for last two years
- Facilitated collaboration to conduct basic and applied research in agriculture
- Promoted agriculture training for youth with diverse challenges

Research Associate (STEM Education) June 2013-June 2015,
Center for Engineering Education Research, Michigan State University, East
Lansing, MI.

- Designed and evaluated educational programs and curricula to promote and retain under- represented students in STEM fields in higher education
- Collected qualitative and quantitative data, analyzed and prepared grant proposals

Research Associate (Ecology/ Molecular Biology) August 2010 –February 2013,
Department of Biological Sciences, Wayne State University, Detroit, MI.

- Studied *Phragmites* weed physiology and developed molecular techniques to identify candidate genes to investigate invasiveness
- Tested and established diverse vector systems and protocols for gene delivery; designed and screened novel mutants for further characterization

Research Associate (Sugar beet Pathology) June 2009- December 2009,
Department of Plant Pathology, Michigan State University, East Lansing, MI.

- Studied field and post-harvest rot etiology in sugar beet and developed experiments under controlled conditions to study post-harvest rot
- Extracted fungal secretome and analyzed proteomics of the extract to identify rot-causing proteins and other components

Research Associate (Microbial Enzyme discovery) September 2006 –June 2009,
Plant Research Laboratory-Dept. of Energy, Michigan State University, East Lansing, MI.

- Conducted microbial bio-prospecting for efficient enzyme discovery for bio-ethanol industry and identified the components of different fungal secretome
- Organized workflow, information, and material exchange among collaborators and stakeholders in bio-energy research

Graduate Assistant (Plant Pathology) September 1999-August 2006,
Department of Plant Pathology, Michigan State University, East Lansing, MI.

- Studied *Rhizoctonia* crown and root rot disease and *Rhizoctonia* seedling damping-off disease in sugar beets – field, microscopic and molecular approach
- Taught course on Fungal Biology and Integrated Science for non-science majors

Demonstrator (Botany) May 1996- August 1997,
Faculty of Science, University of Colombo, Sri Lanka

- Set up Biology laboratory exercises, prepared and taught underlying theory of each laboratory lesson
- Assisted and monitored students' laboratory progress by assessing reports. Conducted laboratory examinations in the technical and theoretical aspects

AD HOC PROFESSIONAL CONTRACTS

Curricula Development (Bachelor of Landscape Management Program) May 2017,
Department of Landscape Design, Fanshawe College, London, ON

- Worked with various stakeholders to determine course goals and delivery
- Developed curricula for four courses as follow: (1) Plant Systems Environment and use, (2) Greenhouse Operations, (3) Plants, Plagues and People – Plant Diseases, (4) Plants, Plagues and People – Insects

PROFESSIONAL PREPARATION

Ph.D. (Plant Pathology) Michigan State University, East Lansing, MI. 2006

- Dissertation title: *Rhizoctonia* disease in sugar beet: Disease screening and cyto-histopathology of sugar beet, *Rhizoctonia solani* interaction;

Advisors: Dr. Mitch McGrath & Dr. Ray Hammerschmidt

M.S. (Plant Pathology) Michigan State University, East Lansing, MI. 2003

Dissertation title: Temperature mediated chitinase production during *Rhizoctonia* root and crown rot disease in sugar beet (*Beta vulgaris* L.) tap roots; Advisor: Dr. John Halloin

B.S. (Botany Honors) University of Colombo, Sri Lanka 1996

HONORS AND AWARDS

Postgraduate Teaching Scholar- Michigan State University 2008,
Paul Taylor scholarship- Michigan State University 2001

SERVICE

Member At Large (Environment and Ecology) March 2017 – Present,
Environmental and Ecological Planning Advisory Committee (EEPAC), City of
London, ON. Canada

- EEPAC provides technical advice and recommendations to the City of London on matters which are relevant to the City of London's Official Plan, Environment & nature

Mentor –Undergraduate Independent Research Program September 2006 –June 2009,
Bioenergy Research, Michigan State University, East Lansing, MI. USA

- Guided and supervised undergraduate research program

Member- Steering Committee 2007,
Okemos Public School district, MI. USA

- Played important role in identifying the critical issues faced by the school district and helped in developing strategic plans

Mentor- High School Honors Science Program Summer 2004 & Summer 2005,
Michigan State University, East Lansing, MI. USA

GRANTS

Canada Summer Jobs -Youth Employment Strategy 2020
Canadian Agriculture Partnership – Market Products in Canada 2019
Canada Summer Jobs -Youth Employment Strategy 2019
Agricultural Youth Green Job Initiatives 2018

Canada Summer Jobs -Youth Employment Strategy 2018
NSERC Industry Partner- Recycle growing media 2017
Canada Summer Jobs -Youth Employment Strategy 2017
Growing Forward 2 (Ontario Soil and Crop Association)- Energy 2017
Growing Forward 2 (Ontario Soil and Crop Association)- Marketing 2017

PUBLICATIONS (RESEARCH ARTICLES)

(Please note last name changed from Nagendran to Sivakumar)

Biruk Feyissa, **Sivakumar Subashini**, Ze-Chun Yuan (202X) Plant Microbiota: Diversity, Functions, and Application for Sustainable Agriculture. Manuscript under preparation

Feng Tao, Chuanzhu Fan, Yimin Liu, **Subashini Sivakumar**, Kurt P. Kowalski, Edward M. Golenberg (202X) Optimization and Application of Phragmites australis Transcriptome Assemblies. Manuscript under preparation.

Vergara CE, Cavanaugh M, **Sivakumar S**, Briedis D, Dionise TD, Esfahanian AH, Sticklen J, Urban-Lurain M (2015) Toward a Framework for Assessing Computational Competencies for Engineering Undergraduate Students. Conference full paper presented at American Society for Engineering Education (ASEE), Washington Convention Center, Seattle

Sivakumar S, Vergara CE, Caldwell T, Foster K, Henry L, Caldwell R, Shanks-Lane (2014) Increasing Retention of Under-Represented Minority Students in Engineering: The Diversity Programs Office - Scholars Program (DPO-SP). Conference full paper presented at American Society for Engineering Education (ASEE), Indiana Convention Center, Indianapolis

Nagendran S, Hallen-Adams HE, Paper JM, Aslam N, Walton JD (2009) Reduced genomic potential for secreted plant cell-wall-degrading enzymes in the ectomycorrhizal fungus *Amanita bisporigera*, based on the secretome of *Trichoderma reesei*, Fungal Genetics and Biology, 46:5::427-435

Nagendran S, Hammerschmidt R and McGrath JM (2008) Identification of sugar beet germplasm EL51 as a source of resistance to post-emergence *Rhizoctonia* damping-off, European Journal of Plant Pathology, 123:461–471

McGrath JM and **Nagendran S** (2007) Discovery of resistance to seedling disease caused by *Rhizoctonia solani* AG2-2, description of the host-pathogen interaction, and development of a seedling disease screening nursery, Journal of Sugar Beet Research, 44(3)

Nagendran S, McGrath JM (2005) Sugar beet seedling disease resistance caused by *Rhizoctonia*, Annual Beet Sugar Development Foundation Research Report, p. D7-D11

Nagendran S, McGrath JM (2004) *Rhizoctonia* seedling damping off in sugar beets, 2003 Annual Beet Sugar Development Foundation Research Report, p. D13-D17

Nagendran S, McGrath JM (2003) Histopathology and histochemistry of *Rhizoctonia* seedling damping off, Annual Beet Sugar Development Foundation Research Report. p. D24

PUBLICATIONS (POSTER PRESENTATION)

Sivakumar S (2014) Framework to align plant pathology curricula and training to phytopathology workforce needs. Annual Conference, American Phytopathology Association, Minneapolis Convention Center, Minnesota, Phytopathology Professionalism-Outreach - Teaching and Learning 650-P

Sivakumar S, Vergara CE, Caldwell T, Foster K, Henry L, Caldwell R, Shanks-Lane (2014) Increasing Retention of Under-represented Minority Students in Engineering: The Diversity Programs Office - Scholars Program (DPO-SP). CREATE mini-conference Michigan State University, E. Lansing, Michigan

Walton JD, Hallen-Adams HE, Luo H , **Nagendran S**, Scott-Craig J (2009) Surprises in the genome of the mycorrhizal mushroom *Amanita bisporigera*. XIV International Congress on Molecular Plant-Microbe Interactions (MPMI) Laval University, Quebec

Banerjee G, Scott-Craig JS, Borrusch MS, **Nagendran S** and Walton JD (2009) Over-expression and purification of *Trichoderma reesei* glycosyl hydrolases in *Pichia* and in *T. reesei*, Fungal Genetics Reports, Vol. 56. Asilomar Conference Grounds, Pacific Grove, California

Walton JD, **Nagendran S**, Scott-Craig JS, Borrusch MS (2007) Constructing a synthetic enzyme mixture for lignocellulose degradation, Great Lakes Bioenergy Center (GLBRC) Annual conference Kellogg Biological Station, Michigan

Chundawat SPS, Venkatesh B, **Nagendran S**, Gunter HA, Walton JD and Dale BE (2006) Development and validation of an automated 96-well microplate hydrolytic assay for AFEX treated lignocellulosics using commercial enzyme mixtures & synergistic fungal enzymes, 29th Symposium on Biotechnology for Fuels and Chemicals Denver, Colorado

Nagendran S, Halloin JM (2000) Production of chitinase during the defense response of sugar beet tap roots. Phytopathology 90:S55. P-2000-0389-AM, Annual Conference,

American Phytopathology Association, New Orleans Convention Center, Louisiana

PUBLICATIONS (TALKS)

Nagendran S, McGrath JM (2006) Host-Pathogen Interaction of sugar beet seedlings with *Rhizoctonia solani*, Plant and Animal Genome XIV Conference, Town and Country Hotel, San Diego, California

Nagendran S, McGrath JM (2004) Seedling resistance to *Rhizoctonia solani* in Sugar Beet, Phytopathology Annual Conference, American Phytopathology Association Anaheim, California

Nagendran S, Halloin JM, De Los Reyes BG and McGrath JM (2001) Molecular and biochemical analysis of the defense response of sugar beet taproots to infection by *Rhizoctonia solani*, Phytopathology Annual Conference, American Phytopathology Association Salt Lake City, Utah