SPECIFIC EPAS (observable & measurable) and **Optional/Specialization-Specific Milestones**

A – WELLNESS, RESILIENCY AND EQUITY

1. **Survival skills: Integrate learning opportunities designed to enhance personal wellness**
2. **Demonstrate cultural and EDI (equity, diversity, inclusiveness) awareness and sensitivity**
   Understand and apply best practices to achieve equitable, diverse, and inclusive representation.
   Know how to apply EDI principles for patient-oriented and patient-partnered research.
   - Conduct *sex- and gender-based analysis* in context of diversity framework to develop research policies and services.
   - Recognize the ways in which *determinants of health* such as age, ethnicity, disability, sexual orientation, socio-economic or migration status, and geography interact with sex and gender to affect health, disease risk/outcomes.
   - Describe the *unique needs of adolescents* and their transition to adulthood related to confidentiality and consent processes in research.
3. **Research in partnership with Indigenous Peoples, Communities**
   Recognize important considerations for conducting research in partnership with Indigenous (First Nations, Inuit and Métis) peoples of Canada.

B – KNOWLEDGE ACQUISITION

4. **Broad knowledge of a scientific discipline**
   Demonstrate broad knowledge of a scientific discipline.
5. **Current content expertise in a specific area**
   Develop up-to-date expertise in a specific scientific area of focus.
6. **Knowledge of research tools and approaches (broad / area-specific)**
   Identify and differentiate appropriate tools and approaches to answer key research questions.

C – RESEARCH SKILLS & SCIENTIFIC RIGOR

7. **Critical thinker**
   Apply critical and creative/innovative thinking skills.
8. **Skilled investigator**
   Demonstrate essential skills of a successful investigator.
   - Demonstrate knowledge about the design and conduct of clinical trials, including issues such as designing multi-site trials, negotiating budgets, data sharing agreements, data handling, and trials for rare diseases.
9. **Computational/analytical skills**
   Analyze and synthesize data using a repertoire of relevant computational & analytical abilities.
   - Demonstrate bioinformatics literary and understand its application to research studies.
   - Demonstrate an awareness of advanced analytical techniques such as artificial intelligence and machine learning and their application to large data sets to address to human health questions.

D – RESEARCH REGULATORY CONSIDERATIONS

10. **Knowledge & demonstrated practice of responsible conduct of research**
    Recognize and practice responsible conduct of research.
    - Demonstrate understanding of ethical frameworks for human subject research, including government policies and regulations about pharmaceutical and technology transfer, interactions with for-profit sector, protection of intellectual property and health services delivery.
    - Discuss the ethical issues related to experimentation and drug trials in children and women.
11. **Research safety & regulatory issues**
    Read and apply relevant safety and regulatory guidelines.
12. **Regulations, governances, quality assurance and risk management**
    Demonstrate knowledge of regulatory, governance, quality assurance, risk management, and data ownership principles; application to your research.
    - Practice appropriate laboratory biosafety.
    - Describe specific regulations for research use of human tissue (placenta, fetal tissue, cord blood, embryos, stem cells, biopsy samples, etc., including those collected in infancy/childhood).
    - Describe regulations for research involving DNA banking and gene sequencing across the life span.
    - Demonstrate knowledge of processes related to research entrepreneurship (*eg*, commercialization, technology transfer, business practices in the for-profit sector).

E – COMMUNICATION, COLLABORATION & LEADERSHIP

13. Skilled oral and written communicator

Demonstrate effective communication skills (oral, written, other) to disseminate research knowledge to partners and end-user groups. Understand concepts of knowledge dissemination. Be a credible expert.

14. Integrated team player

Use opportunities for collaboration and team-based science initiatives.

15. Mentorship, management and influence

Use opportunities to develop leadership and/or management skills.

- Use opportunities to engage patients/research participants meaningfully into your research environment (*eg*, their roles might include input on governance, priority setting, study conduct, knowledge dissemination).