

# Deep dive into neuropathology

**Imeka lets you see  
white matter like you've  
never seen it before.**

**imeka**   
Imaging what matters

# We illuminate your data—from pipeline to product

**Enhance your CNS drug development process with our revolutionary white matter imaging platform.**

While diffusion MRI can pick up a signal from the white matter, standard data analysis procedures (DTI) cannot identify areas of interest or differentiate pathology from *complexity*.

**Imeka can.**

By combining diffusion MRI with artificial intelligence, Imeka can analyze white matter MRI signals in greater detail than anyone else. We can track crossing fibers, identify inflammation, and distinguish demyelination from axonal loss.

**With our diffusion MRI analytic process you can learn if, how, and where in the brain your drugs are working.** We call this *Imeka validation*, and it can change your whole pipeline development process for the better.

CNS: central nervous system; MRI: magnetic resonance imaging; DTI: diffusion tensor imaging

# Enhance your CNS pipeline with our translational biomarkers

**Our biomarkers are generated by our evolved and proprietary MI-Brain platform.**

Composed of automatically extracted regions of interest and crucial microstructure elements, our biomarkers include:



**Alzheimer's disease**

**Fiber bundles:**

Medial temporal bundles;  
corpus callosum;  
posterior cingulum

**Metrics:**

**Neuroinflammation**

Axonal loss  
Myelin index



**Multiple Sclerosis**

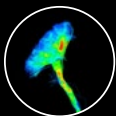
**Fiber bundles:**

Lesion load dependent;  
normal-appearing white matter

**Metrics:**

**Myelin index**

Neuroinflammation  
Axonal loss



**Parkinson's disease**

**Fiber bundles:**

Brain stem;  
thalamus;  
substantia nigra;  
motor cortex

**Metrics:**

**Neuroinflammation**

Axonal loss  
Myelin index



**Others**

**Fiber bundles:**

50 different fiber bundles

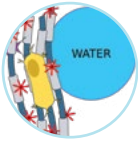
**Metrics:**

**Neuroinflammation**

Axonal loss  
Myelin index

# We track and quantify measures that matter

## WHAT WE MEASURE



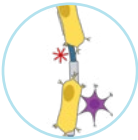
### Neuroinflammation,

by analyzing signals of free-water or extracellular space.

Increased EC space  
EC: extracellular



**Myelin integrity,** by analyzing free-water-corrected radial diffusivity.



**Axonal integrity and white matter health,** as indicated by apparent fiber density.

**Our white matter imaging extracts extraordinarily detailed information from readily available MRI data.**

## **HOW IT WORKS**



You tell us the mechanism of action, and we tell you how that translates into imaging.



We coordinate image acquisition based on what you want to know.



We give you actionable answers based on artificial intelligence analysis of the data and our knowledge and expertise.

## **WHAT IT MEANS TO YOU**

You get valuable information to help optimize your pipeline.

# Optimize MRI time and streamline your pipeline

Imeka validation will help you  
move a molecule from candidate  
to product more efficiently.

## IMEKA VALIDATION OPPORTUNITIES

### PRECLINICAL

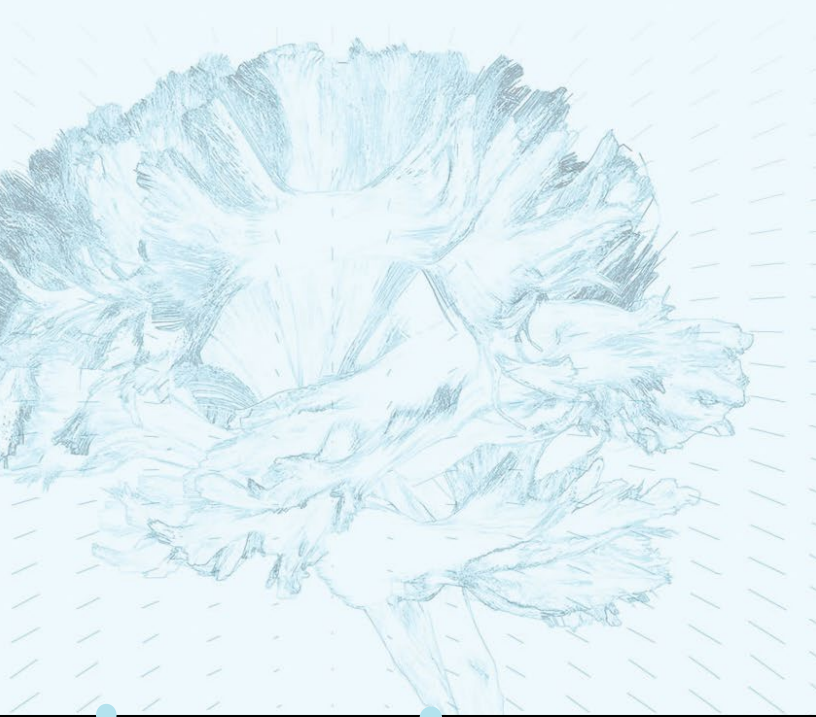
#### **Refine the pipeline:**

Remove ineffective/  
inappropriate  
candidates before  
over-investing.

### PHASE 1 PHASE 2/2B

#### **Accelerate the proof-of-concept stages:**

Get early  
information from  
small sample trials on  
specific markers of  
neuroinflammation,  
axonal integrity, and/  
or myelin content,  
including the type and  
magnitude of change.



## PHASE 3

**Streamline study recruitment:** Select the right patients for your trials, based on validated markers of white matter microstructure along specific pathways.

**Track and quantify efficacy:** Follow disease progression and drug efficacy longitudinally throughout your late-stage clinical trials.

## REGISTRATION

**Expedite the approval process:** Provide nuanced data to regulatory bodies to prove the therapeutic value of your product.

# What is *your* area of focus?

**Let's talk about what we can accomplish together.**

**Jean-René Bélanger | CEO**

✉ [jr.belanger@imeka.ca](mailto:jr.belanger@imeka.ca)


**Gordon Starck | Sales Account Manager**


✉ [jgordon.starck@imeka.ca](mailto:jgordon.starck@imeka.ca)

## **A little about Imeka**

Imeka is currently the only company to combine diffusion imaging and AI to map white matter integrity and get insights on neuroinflammation, demyelination, and axonal loss. Our main goal is to play an influential role—and minimize risk—in the search for and development of cures for brain disease.

Imeka's imaging abilities are powerful, unique, and non-invasive. We truly believe any research and procedure involving the brain will benefit from our capabilities and our biomarker-generating platform for white matter imaging.

 [linkedin.com/company/imeka/](https://www.linkedin.com/company/imeka/)

 imeka.ca

© 2021 Imeka

**imeka**   
Imaging what matters