

INTERACTIVE BROCHURE



**YOUR PARTNER FOR
THE PRECLINICAL PHARMACOLOGY OF PAIN**



« We aim to act as an extension
of your scientific team »

Dr. François **CAUSSADE** 
President / Chief Executive Officer

ANS Biotech is an independent preclinical Contract Research Organization (CRO) fully dedicated to the **pharmacology of pain**. The company offers its clients a unique combination of expertise in the fundamentals of pain pharmacology and a proven record of R&D program management for new and innovative analgesics.

Our mission is to collaboratively support the drug discovery and development efforts of human and animal health companies by offering:

- > Unique early **screening services** to profile your drug candidates,
- > **Tailored solutions** for the management of your research projects,
- > A growing list of clinically relevant and predictive disease and efficacy *in vivo* models of pain,
- > Comprehensive consulting services based on an extensive industrial experience.

As a close Pharma and Biotech **partner**, ANS Biotech commits itself to providing cost-effective preclinical pharmacology services performed to the highest ethical and quality standards. Our validated and customized behavioral studies can help to quantify the efficacy of your compounds before they move into clinic by:

- > Establishing proof of concept & mechanism of action for drug candidates,
- > Achieving the critically important positioning of these agents within precise therapeutic categories (cancer pain, neuropathic pain, visceral pain, ...),
- > Benchmarking drug candidates with clinical gold standards.

We aim to act as an **extension of your scientific team** wherever you are located around the world, helping you to optimize and accelerate the development of your drug candidates.

Your discoveries are as unique as our services



Prerequisites

Early Lead Selection

- Dose range
- Side effects
- PK data
- Drug exposure



Therapeutic areas

Characterization of Candidates

- Neurology
- Gastroenterology
- Rheumatology
- Oncology
- Surgery and Anesthesia

You

&

Us

Together

From the early identification of your **leads** to the characterization of your **candidates**, ANS Biotech supports your R&D efforts by offering a broad range of services from ubiquitous tests to accurate pain models within precise therapeutic categories.

PPP PRECLINICAL PAIN PROFILING

CUSTOMIZED R&D
by ANS Biotech

CONSULTing
by ANS Biotech

TRAINing
by ANS Biotech

FEEforSERVICES
by ANS Biotech

ALGOGram™
Xpress Screening

NOCIWay™
Xpress Screening

ANSbioSamples

Your partner for building step by step your
preclinical dossier!



At each step of the preclinical R&D of your drug, ANS Biotech offers helpful and relevant services.

You

&

Us

Your needs

- **Early data**
- **Candidate selection**
- **Proof of concept**
- **Competitive advantage**

Our solutions

- **Strategy**
- **Screening**
- **Pathophysiology**
- **Diseases**



ANS Biotech Auvergne NeuroSciences Your partner for building step by step your **preclinical dossier**

Your pain projects

Click on the pain project of interest to see how we can support your R&D efforts

NEUROPATHIC PAIN PROJECT

INFLAMMATORY PAIN PROJECT

CANCER PAIN PROJECT

VISCERAL PAIN PROJECT

POSTOPERATIVE PAIN PROJECT



INFLAMMATORY PAIN PROJECT

CANCER PAIN PROJECT



VISCERAL PAIN PROJECT

POSTOPERATIVE PAIN PROJECT



Your partner for building step by step your **preclinical dossier**



PREREQUISITES

NEUROPATHIC PAIN PROJECT

PPP

1 • STRATEGY

2 • SCREENING

3 • PATHOPHYSIOLOGY

4 • DISEASES

CUSTOMIZEDR&D by ANS Biotech

CONSULTing by ANS Biotech

TRAINing by ANS Biotech

ALGOGram™ Xpress Screening

NOCIWay™ Xpress Screening

ANSbioSamples™

Irwin grid
Dose Range
Safety
Side Effects
Intestinal tansit

Hot Plate
Tail Flick
Plantar
Acute and tonic pain
Paw Pressure
Formalin

Traumatic Neuropathy
CCI
SNL
SNI

STZ
Diabetic Neuropathy
Chemo-induced peripheral Neuropathy
OXP

CUSTOMIZEDR&D by ANS Biotech

CONSULTing by ANS Biotech

TRAINing by ANS Biotech

ALGOGram™ Xpress Screening

NOCIWay™ Xpress Screening

ANSbioSamples™

BACK & FORTH TO STRATEGY LEVEL AT EVERY DEVELOPMENT PHASE





NEUROPATHIC PAIN PROJECT

CANCER PAIN PROJECT



VISCERAL PAIN PROJECT

POSTOPERATIVE PAIN PROJECT



Your partner for building step by step your **preclinical dossier**



PREREQUISITES

INFLAMMATORY PAIN PROJECT

PPP

1 • STRATEGY

2 • SCREENING

3 • PATHOPHYSIOLOGY

4 • DISEASES

- CUSTOMIZED R&D by ANS Biotech
- CONSULTing by ANS Biotech
- TRAINing by ANS Biotech
- ALGOGram™ Xpress Screening
- NOCIWay™ Xpress Screening
- ANSbioSamples™

Irwin grid
 Dose Range
 Safety
 Side Effects
 Intestinal transit

Hot Plate
 Tail Flick
 Plantar
 Acute and tonic pain
 Paw Pressure
 Formalin

Carrageenan
 Capsaicin
 Acute Inflammatory Pain
 Kaolin
 CFA

CFA
 Rheumatoid Arthritis
 Osteoarthritis
 MIA
 MNX

- CUSTOMIZED R&D by ANS Biotech
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- TRAINing by ANS Biotech
- ALGOGram™ Xpress Screening
- NOCIWay™ Xpress Screening
- ANSbioSamples™

BACK & FORTH TO STRATEGY LEVEL AT EVERY DEVELOPMENT PHASE





NEUROPATHIC PAIN PROJECT

INFLAMMATORY PAIN PROJECT



VISCERAL PAIN PROJECT

POSTOPERATIVE PAIN PROJECT



Your partner for building step by step your **preclinical dossier**



PREREQUISITES

CANCER PAIN PROJECT



1 • STRATEGY

2 • SCREENING

3 • PATHOPHYSIOLOGY

4 • DISEASES

CUSTOMIZEDR&D

CONSULTing

TRAINing

ALGOGram™

NOCIWay™

ANSbioSamples™

Irwin grid
Dose Range
Safety
Side Effects
Intestinal tansit

Hot Plate
Tail Flick
Plantar
Acute and tonic pain
Paw Pressure
Formalin

CFA
Kaolin
Carrageenan
Capsaicin
Inflammatory Pain
Neuropathic Pain
CCI
SNL
SNI

Bone Cancer Pain
MRMT-1

CUSTOMIZEDR&D

CONSULTing

TRAINing

ALGOGram™

NOCIWay™

ANSbioSamples™

BACK & FORTH TO STRATEGY LEVEL AT EVERY DEVELOPMENT PHASE





NEUROPATHIC PAIN PROJECT

INFLAMMATORY PAIN PROJECT



CANCER PAIN PROJECT

POSTOPERATIVE PAIN PROJECT



Your partner for building step by step your **preclinical dossier**



PREREQUISITES

VISCERAL PAIN PROJECT



1 • STRATEGY

2 • SCREENING

3 • PATHOPHYSIOLOGY

4 • DISEASES

- CUSTOMIZED R&D by ANS Biotech
- CONSULTing by ANS Biotech
- TRAINing by ANS Biotech
- ALGOGram™ Xpress Screening
- NOCIWay™ Xpress Screening
- ANSbioSamples™

Irwin grid
 Dose Range
 Safety
 Side Effects
 Intestinal transit

Hot Plate
 Tail Flick
 Plantar
 Acute and tonic pain
 Paw Pressure
 Formalin

Writhing test (PBQ/acetic acid)
 Acute visceral Pain

Irritable Bowel Syndrome
 TNBS
 PRS

- CUSTOMIZED R&D by ANS Biotech
- CONSULTing by ANS Biotech
- TRAINing by ANS Biotech
- ALGOGram™ Xpress Screening
- NOCIWay™ Xpress Screening
- ANSbioSamples™

BACK & FORTH TO STRATEGY LEVEL AT EVERY DEVELOPMENT PHASE





NEUROPATHIC PAIN PROJECT

INFLAMMATORY PAIN PROJECT



CANCER PAIN PROJECT

VISCERAL PAIN PROJECT



Your partner for building step by step your **preclinical dossier**



PREREQUISITES

POSTOPERATIVE PAIN PROJECT



1 • STRATEGY

2 • SCREENING

3 • PATHOPHYSIOLOGY

4 • DISEASES



Irwin grid
Dose Range
Safety
Side Effects
Intestinal transit

Hot Plate
Tail Flick
Plantar
Acute and tonic pain
Paw Pressure
Formalin

Carrageenan
Capsaicin
Acute Inflammatory Pain
Kaolin
CFA

Postoperative Pain
Incisional pain



BACK & FORTH TO STRATEGY LEVEL AT EVERY DEVELOPMENT PHASE





Translational pain research is based on preclinical models with a well-understood mechanism and the application of these findings to the clinic (bottom-up). Another approach is based on exploratory research in the clinic and the back-translation of these results to preclinical models (top-down).

ANS Biotech R&D is one of our founding pillars built on the back-translational approach leading to develop **original and relevant preclinical models** inspired by clinical studies. We also undertake research projects in response to individual customer requests. Attentive to our clients' needs, ANS Biotech has developed preclinical models in cancer pain, inflammatory pain, neuropathic pain, visceral pain, and osteoarthritis pain over the last years.



« We develop original and relevant preclinical models inspired by clinic »

Dr. Laurent **DIOP** 
Chief Scientific Officer



Based on our scientific experience in pain, we propose a variety of consulting services.

PROJECT EVALUATION: We provide advice, recommendations and a complete scientific evaluation based on an extensive experience in the development of drugs for pain relief.

PROJECT MANAGEMENT: For specific projects, we can elaborate preclinical and clinical strategies, and we are able to ensure outsourcing management until project completion.

SCIENTIFIC AND MEDICAL WRITING: Scientific documentation (publications, investigator brochures, regulatory reports, ...) can be prepared.



Technical expertise is critical to run *in vivo* experiments successfully and we have amassed a considerable number of laboratory skills over the years by leveraging the **extensive experience of our laboratory team**. Part of these skills might prove useful to our clients with respect to their own in-house activities, and transfer is available through on-site training either in ANS Biotech or client facilities.



Support services

YOUR DECISION MAKING GUIDE



IN VIVO SCREENING IN RATS

When profiling leads in your discovery programs, you should consider **ALGOGram™**, a unique *in vivo* screening tool that provides a rapid and cost-effective means to simultaneously explore activity in 10 fully validated pain models / tests across 5 different pain areas.

Whether your R&D programs target pain directly or they simply share features common to established pain mechanisms, you can obtain analgesic fingerprints of your leads in only 3 weeks.

ALGOGram™ provides a user-friendly pharmacological compound profile based on simple-to-view plots facilitating your crucial "GO / NO GO" decisions.



IN VIVO SCREENING IN MICE

If you are interested in a pain profile for your discovery leads, but are restricted to the use of mice, then you should consider **NOCIWay™**, a unique *in vivo* screening tool that has been configured for use in this species.

Advantages include low compound requirements, rapid turnaround time and cost-effectiveness.

NOCIWay™ simultaneously explores the activity of your compounds in 5 fully validated pain models / tests across 3 different pain areas.

The analgesic fingerprint provided by **NOCIWay™** can be your first *in vivo* result serving as a guide for further development.

ANSbioSamples

DRUG LEVELS IN RODENT BIOLOGICAL TISSUES

Linking *in vivo* pharmacokinetic assessments with efficacy endpoints can give a better understanding of the dynamics of drug action, and **ANSbioSamples** provides the ideal platform to establish these key relationships.

With **ANSbioSamples**, dosing and collection of healthy or pathological tissues are performed using a variety of customizable paradigms combining the desired route of administration with more than 20 biological tissue sources.

Drug exposure information can be used in conjunction with efficacy endpoints or as a prelude to determine the ideal dosing / timing for subsequent efficacy assessments. Bioanalysis can be performed *via* our preferred partner organizations, or samples can be shipped worldwide to your vendor of choice.



Partners

Consider the combination of ANS Biotech experience with that of our partners.



Bioanalytical services



Translational EEG services



Histology services



CNS electrophysiology services



Research foundation dedicated to pain



Clinical trials



Contacts

« Qualification of the need, flexibility, fast turnaround times and operational excellence are our daily business »



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